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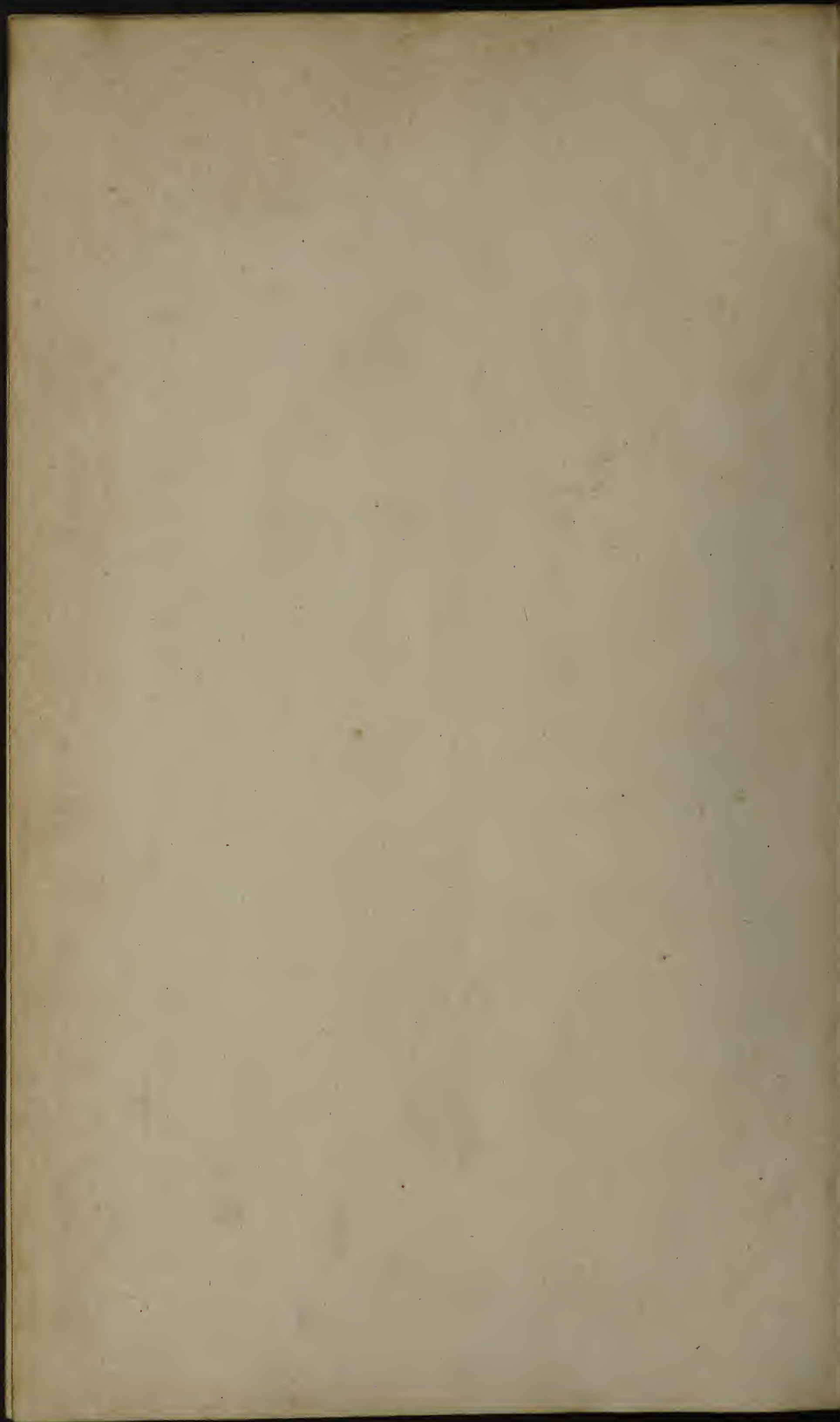
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Joannes Browne
Regius Chirurgus Ordinarius.
Ætatis suæ 39 An̄o Dōm 1681.

A
Compleat Treatise
OF THE
MUSCLES,
As they appear in
Humane Body,
And arise in
DISSECTION;
With Diverse
Anatomical Observations
Not yet Discover'd.
Illustrated by near Fourty
COPPER-PLATES,
Accurately Delineated and Engraven.

By John Browne, Sworn Chirurgion in Ordinary to His Majesty.

Non Nobis Nati.

In the SAVOY.
Printed by *Tho. Newcombe* for the Author. 1681.



TO HIS
Most Sacred Majesty
CHARLES II.

By the Grace and Providence of God

KING

OF

Great Brittain, France, and Ireland,
Defender of the Faith, &c.

THESE

Anatomical Exercitations

OF

MUSCULAR DISSECTION,

Are most Humbly Dedicated, by

Your Majesties

Most Loyal Subject,

And most Obedient Servant,

John Browne.

THE
MILITARY
CHARLES II.
KING
OF
ENGLAND AND IRELAND
DECEASED
ANATOMICAL & PHYSIOLOGICAL
ANALYSIS
AND A CLEAR DISSECTION
OF THE
HUMAN BODY
BY
JOHN BROWNE.
OF THE
ROYAL SOCIETY.

Charles R.

CHARLES By the Grace of God,
King of England, Scotland, France, and
Ireland, Defender of the Faith, &c. To
all Our loving Subjects of what Degree, Condition, or
Quality soever within Our Kingdom and Dominions,
Greeting: Whereas it hath been manifested unto Us,
that Our Trusty and Well-beloved John Browne Esq;
one of Our Chirurgeons in Ordinary, hath not only
with great Art, but at the Expence of much Time
and Charge, delineated, described, and accurately En-
graved in Copper-plates an Anatomical Treatise of
Muscular Dissection; which performance of his is
to Our great liking and satisfaction, so that We may
express Our Approbation thereof, and give him all due
and ample encouragement for the future; We do
hereby signifie Our Royal Pleasure, granting unto
the said John Browne the sole Priviledge of
Printing the aforesaid Treatise with its Copper Fi-
gures; and strictly Charging, prohibiting and forbidding
all Our Subjects to Copy or Counterfeit any the
Sculptures or Description aforesaid; either in great or
small, or to Import, Buy, Vend, Utter or Distribute
any Copies or Exemplars of the same Reprinted be-
yond the Seas within the term of Fifteen Years next
ensuing the Date of this Our License; and Pro-
hibition, without the Consent and Approbation of the
said John Browne, his Heirs, Executors and Assigns,
as they and every of them so offending will answer
the

the contrary at their utmost Perils ; Whereof as well
the Wardens and Company of Stationers of Our City
of London, the Farmers, Commissioners, and Officers
of Our Customs, as all other Our Officers and Mi-
nisters whom it may concern, are to take particular
notice that due Obedience be given to this Our Royal
Command.

Given at Our Court at Whitehall this 22th Day
of Nov. in the Three and thirtieth Year of, &c.

By His Majesties Command,

L. Jenkins.

TO

To His Grace
CHRISTOPHER
Duke of Albemarle,


Earl of Torington, Baron Monck of Pothoridge, Beauchamp, and Teyes, Knight of the Most Noble Order of the Garter, One of the Gentlemen of His Majesties Bed-Chamber, One of His Majesties most Honourable Privy-Council, Lord Lieutenant of the Counties of Devon and Essex, And Captain of His Majesties Guards of Horse.

May it please Your Grace,



IS Majesty having been Graciously pleased not only to take a view of, but to allow the Publication of this Treatise of Muscular Dissection; Now after Him it waits at Your Graces Feet, imploring Your Pardon for its Presumption: But Your Generous Spirit always encouraging the Industrious Man, breathes Life into my Undertaking, by which Your Grace does declare to the World Your valuable Goodness, as well as Your substantial Honour: You never exercising Your self in little Designs, but in the Publick Service of Your King and Countrey;

Clarissimis, Doctissimisque Viris D.D.
—Præsidi & Sociis Collegii Regalis Medicorum Londinensium, Myologicam
hanc exercitationem ex animo lubens ac
merito Dicat Dedicatque, J. Brown.

uantum Lucis Scientiæ conferat Methodica Institutionis ratio, non vobis solummodo (Literatorum Coryphæi) sed & Tyronibus etiam omnibus tam clarum est, quam quod Clarissimum. Partes enim si Debitâ serie tractentur explicenturque, & perspicuè abinvicem dignoscuntur, & multo melius a Lectoribus percipiuntur; Quippe quod Ordinata rerum dispositio præcepta, tam Jucundiora, tam facilia reddat, dum singula separatim in suâ Classe reposita, memoriâ adjuvant & oblectant. Ut igitur ista tam manifesta prætermittam, de re ipsâ dicere liceat. Antiquiores hanc Scientiam Anatomicam in duas partes diviserunt, Actionem, & Contemplationem, quarum alterius ope, quicquid in Cælo, Terrâ Marique videri usquam possit, in uno homine conspicitur, & tot miracula deteguntur, ut Calamus iis enumerandis oneri succumberet, & admiratio nos penitus obruat. Nihil est quod vel à Naturâ, vel Arte expectari possit, quod hæc Ars non proferat. Subjectum enim ejus adeo nobile est, nimirum Corpus hominis, ad Imaginem Dei, à Deo creati, ut nihil nobilius sub Sole inveniri possit; & singulas humani corporis particulas adeo eleganter describit, ut Arti simul vestræ Medicorum, & nostræ Chirurgorum

Epistola Dedicatoria.

rurgorum summo ornamento fiet. Veritatem in
abditis musculorum (& cæterarum partium) meatibus
& tenuissimis fibrillis latentem è Tenebris
vindicat, & in clarissimam Lucem revocat. Obs-
curis Lumen, Obsoletis nitorem, Fastiditis gratiam;
Dubii fidem, & vetustate quasi abrogatis Authori-
tatem conciliat: Per hanc Medici ferendo Judicio
aptiores fiunt; cum Symptomatibus & indicatio-
nibus instructi citius certiusque affirmare queant,
quam partem, quâ causâ morbi dolor, urgeat,
afficiatque imò ex ipsâ mortuorum dissectione
discunt, & vivis hominibus, bonâ valetudine uten-
tibus, vitam denuò instaurare, & moribundus Spi-
ritum, nè exeat, detinere. Et in hac equidem praxi
nulla unquam ætas fuit (sive diligentiam indefes-
sam, sive abundantem Inventorum sælicitatem Spe-
ctes) nostrâ hac aut ditior aut foecundior; cujus
assidua Cura ac Labor improbus nova non pauca
adinvenit, antiqua correxerit, & hanc artem ita illu-
stravit, ut jam ferè ad culmen perfectionis summum
pervenisse videatur. Quod si de Anatomicis vi-
dendum esset. Nostrates plurimi extiterunt Heroes,
qui ut sidera Cæli, Clarissima medicinæ Lumina,
& veluti Dii Mortales in hac Arte emicuerunt; In-
ter quos quantâ cum famâ Harvæius, Entius, Glif-
sonius, Whartonus, Charltonus, Willisius, Gual-
terus Nedhamus, Lowerus, cum multis aliis scrip-
serunt, ut Libri & nomina ipsorum celeberrima
nullis delenda sæculis testantur. Jam tandem ad
vos, Viri Apollinei, mea se dirigit Oratio, sub quo-
rum Patrocinio Lucubrationes hasce ausus sum di-
vulgare. De vobis dicere fas est; quod quasi Me-
dicorum Principes doctrinæ Jatricæ fines producit,
& Industriâ quotidianâ Artem condecoratis, unâ &
augetis; adeò ut ex Collegio vestro, veluti solo fertili,
Inventa

Epistola Dedicatoria.

Inventa felicissima ad artis propagationem, & Morborum extirpationem indies nascantur. Ad me quod attinet, Non ita arrogans sum, ut aliorum aut dicta, aut facta mihi ascribere velim, sed potius suum cuique tribuere cupiens, Authorum nomina ad marginem Libri appono, quos in Elencho (eos referente, é quorum scriptis universum hoc opus congestum fuit) Invenietis. Nostrum itaque, quaecunque Munusculum, etsi non verbis politum, attamen ad utilitatem hominum aliquo modo conducens, (quandoquidem veritatis plurimum in se contineat) fronte serenâ accipite. Valete & Æternum quam felicissimi vivite,

Sic Orat,

Nominib. Illustrib. & Nobillissim.

Devotissimus & Observantissimus,

John Brown.

To his Highly Esteemed Friend Mr.
John Browne, &c.

S I R,

I Have through want of leisure, but cursorily viewed your History of, and Observations on the Muscles: together with your choice number of their Types and Figures elegantly delineated with your own hand. Yet I think, I did it not so superficially, but that I may truly and confidently say, that whoever considers how profitable, and indeed how necessary the knowledge of the Muscles is, not only in Chirurgery, but in Medicine and Philosophy also, (since the faculty and use of the Nerves which distributes Life and Motion to all parts cannot be understood and explain'd without it) must, when he hath perused your Brief, Accurate, and Judicious Treatise, of the Muscles, together with your Observations and Animadversions thereon, be so Ingenuous, if he be just, as to acknowledge their great usefulness not only to Chirurgeons, but to Students in Medicine and Philosophy likewise, and must therefore joyn with me to their Encomium; and earnestly desire, and importune their Publication as well as

Sir,

Your assured Friend and
Servant,

E. Dickinson M. D.

Physician to the Kings Person
and Family.

b

To

To Mr. John Browne on his Treatise of
Muscles.

S I R,

I Cannot but commend your Ingenuous Design of making so useful a Book for the benefit of young Chirurgeons, and your Judicious choice of Cuts for that purpose: It is a Book which I am sure the Chirurgeons-Hall doth much want, for the younger sort to have in their hands in order to their better attending the Learned Reader. And not only so, but the most able Anatomists will be glad of so compleat a Contraction of so considerable part of Anatomy into one view, where they may at any time recollect themselves, as to their former Readings and Observations. Therefore your Edition of this Treatise cannot but oblige the World, and amongst others,

Charter-House,
April 14. 79.

Sir,

Your humble Servant,

Wal. Needham.

MYographicum hunc Tractatum ab Expertissimo Viro D. Johanne Browne conscriptum, Medicorum Chirurgorumque Tyronibus, & utrorumque etiam Peritissimis utilem fore Judicat,

Tho. Allen M. D.

Regius Medicus Ordinarius & Coll.
Lon. Soc. & Censor.

In Laudem Authoris.

Perlegendo vestrum de Musculis Libellum, magnum invenio certamen inter Ingenium & Ingeniosum tui calamum, quis Palmam portare meruit; & nè iniquè Judicarem, Legentibus sat erit, tam perutilem, sic perjucundum fore existimat,

Amicus tuus tui ad Aras,

Edvardus Warner.

Med. Personæ Regis Ordinarius
& ejus Exercitui M. Generalis.

To his much valued Friend Mr. John
Browne.

S I R,

I Have read over your Treatise of Muscles, (as my time would permit) and find you have taken great pains and care in your Collections, and made good Observations, and exprest much Art and Industry in your Figures: and (by consulting excellent Authors) have contracted much into little: that a competent knowledge in this part of Anatomy (so absolutely necessary in the safe practice of Chirurgery) may probably be much easier attained to, than formerly by young Indagators; and be a further confirmation to others, who have already sweat in the same Study. Therefore I cannot but encourage you to make it publick, by which I suppose you will oblige many who are Friends to such Anatomical Enquiries: amongst whom give me leave to reckon,

Sir,

Martii 26. 79.

Your Affectionate Friend
To serve you,

Edmund King M. D.

Physician in Ordinary to his Majesty.

TO

TO THE
Ingenuous and Studious
R E A D E R.

Curteous Reader,



S Anatomy is generally allowed the best and truest Speculum or Looking-Glass, illustrating, and presenting all the parts of the Body, with their Affects, and Affected Parts, most clearly and evidently: so also is it the main Basis, on which Chirurgery doth build its fairest Fabrick, and comely Structure. And of what great use this hath been, and is, to Mankind, not only the Ancients, but also Modern Writers do most admirably declare; How this Renowned Art hath in former Ages been treated, and carefully treasured up and Celebrated in Theaters and Anatomical Schools, many Authors have to Posterity voluminously satisfied; And that it still doth get greater footing amongst the Ingenuous and Industrious Sons of Art, every Age doth, and may with admiration evince, and the many Learned Lectures annually read, may both most honourably and happily set forth and demonstrate.

This Art of Anatomy, as it doth require the industrious Study, and accurate care of a curious Enquiry, so also doth it reward his pains with the Jewel of Knowledge, and afford his Endeavours the happy issue of a fair success: giving those methods and measures of security

The Epistle to the Reader.

curity in Chirurgical Practice, which are most consentaneous and genuine for the Industrious Practitioner, to study and search after. This is as his best Compass, whereby he may sail freely in the main Ocean of his Art, without any mistrust or dread of splitting himself upon any Rocks of danger, or Shelves of mistake, for its by this alone, that we arrive at and do gain how our Membranes are made, and spun out of Spermatick Fibres, and how out of Maternal Blood are framed our Muscular parts. It is from this Tree of Knowledge, all the differences between a Vein and Artery are pluckt up: Its this Garden that affords us the various Flowers of Nerves and Tendons, and shews us the different Beds of Ligaments and Bones: It's this Sun that conducts the Understanding, that advanceth the same into Affection, that promotes our Affections towards our Maker. And come we but to take a view and survey of the symmetry of his parts, and therein but cast our Eye and consider on the rare Offices and Uses which are variously bestowed on them, we ought as well in Justice, as in Reason, to grant and allow, that nothing in this great Universe may or can surpass him, especially in the exquisite Fabrick of his Muscles, and the variety of their Motion.

Now although Myology hath been by the Ancients thus traced, yet Steno hath quite altered the Fabrick of their design, affirming, that there is in every Muscle two opposite Tendons, into which are inserted two kinds of Fibres, the which being closely annexed do frame the Tendon, and in that part wherein they are loosely intertext, there they do allow of a constituted Flesh, implanting one above another, here placing and disposing the thickness and depth of the Flesh, framing its latitude, and declaring its order of Fibres; and this Figure he describes by a Mathematical Line, taking thence

The Epistle to the Reader.

Steno's de-
scription of
a Muscle.

their Cannons which do explain their actions ; Thus he satisfies, that all the Fleshy Fibres in a simple Muscle, are carried in a direct Line from one Tendon obliquely into another, and these Tendons are interwoven in their opposite ends and angles of the Fleshes ; by which he doth ingeniously describe a Muscle to be a collection of moving Fibres, so framed and formed, that the middle Fleshes do frame an oblique angle, and that the two opposite Tendons do form two Quadrangular Prisma's ; this Figure he very accurately represents by Instruments used by Painters, or Picture-Drawers, wherein we see by the application of their Pegs, the true insertion of their Tendons are hereby very well explained, and the Fleshy parts lively delineated : for when they bring their greatest distances from their opposite angles, and being hereby made more acute, these are brought to two sides, and so this Instrument is made both longer and narrower, this shewing the Muscle no way contracted, but rather narrowed, and reduced into a longer body, the length thereof not being changed, save only in its Position ; Thus have we by Steno shewn, a muscle may appear as a simple part consisting of one Venter and two Tendons, as are many of those in the Arm, or Thigh, and in many other parts of the Body ; or Compound having many Venters, to every of which is allowed two Tendons.

In a simple Muscle, because either one Tendon or both ought to be attracted, and because the attracting part is thin, and broad, the Belly of the Muscle doth require for its frame, a diversity of Fibres to answer to the variety of its Figures ; whereas Compound Muscles are distinguished by their greater variety of Fibres : for besides this variety of Figures which ought to be observed ; so also ought their Venters, being either more or less, with their order of Fibres, and diversity of

The Epistle to the Reader.

of Frames have a respect allowed them. Therefore shall we find that to every simple, as well as compound Muscle is bequeathed a Membranous covering, invested ^{Membrane} with Fleshy Fibres for its direct motion, and is intertext with transverse Fibres for forming it into a Membrane. It hath a Vein and Artery inserted into its middle, send- ^{Vein and Artery.} ing forth of their Surcules into the oblique moving Fibres, from whence the smaller Ramifications being dispersed through the Interstitia of the Fleshes, doth besprinkle and bedew them with their Afflux of Blood, ^{Nerve.} and its Reflux : The Nerve entring herein doth distribute of its small Branches into its neighbouring Muscles, carrying in it the soul of the commanded action, and commanding its execution in the lower guard of the Fleshy Fibres, and of its Membranous Fibrilla's ; And as touching its action, in dissection of living Bodies, we ^{its action.} plainly perceive that it doth contract, but not as the old opinion held : that the Fibres did contract from their ends, towards their Originations, one end of the Muscle being carried through the other ; whereas the Fleshy Fibres only, and their ends are seen to be contracted towards their middle, their Tendons being mutable, and not altered either in their longitude or thickness, the which Worthy Steno first observed, the which he doth describe in the Diaphragma, and those Muscles appointed for Respiration, the which is moved by a constant turn, as is cleared and perceived ; How oft therefore the Muscle is seen to be contracted, all its Fleshy Fibres in either end are apparently shewn to be driven together, and as it were seen to bow and yield to each other ; and hence do seem to appear either shorter or thicker : the which being loosned from its constriction, you will find it to appear in its proper length and thickness, this alteration being produced by the Spirit or subtile Matter which passeth from the Tendons into the Fleshy parts ;
and

The Epistle to the Reader.

and here stuffing them or filling them up in every place, doth force and compel them to yield hereunto, it tumefying its Fibres; but when this recedes from these Flešhy parts into the Tendons, these Fibres do lessen of their bulk, and do appear in their genuine length and thickness.

Humours.

We ought also to speak somewhat of that Matter which keeps them moist, and here may we offer, that as touching the Humours by which all the Muscular Fibres, Flešhes, Tendons and Membranes are besprinkled and filled, and so hereby seen as it were to run into tumefaction, these are generally reckoned two, (vid.) Blood and Nervous Juyce; As to the first, this is allowed to tinge and wash over all the Flešhy Fibres, and those parts to which they are interwoven, and their Membranes, and to soften them with manifest sense; Thus
obs. if Spirit of Wine tinged with Ink, be injected into an Artery reaching a Muscle, the Vein being tied up, you will find all the Superficies of the Flešhy Fibres, and of its transverse Fibrilla's to be covered with blackness, yet will you see its Tendons scarcely concerned with any change of colour, these only irrigating the Flešhy parts, and those chiefly which are most exterior. How much these Humours may, and do conduce towards the Animal Faculties and their Exercise is easily made out: for without this Nervous Liquor, the Animal Spirits would have no proper consistence granted them, and their chief dependance is from their Crasis; Hence therefore according to Steno, a perpetual Afflux of Blood is plainly requisite, for as he observes, in a living Dog, the descendent Trunck of the Aorta or great Artery being tied up without any incision, the voluntary motion of all the back parts do cease, so oft as it was tied up, and that the motion renewed so oft as it was relaxed.

Now

The Epistle to the Reader:

Now when the Muscle is contracted, *Vivisection* doth only declare the *Fleshy Fibres* to attain the only motion, as being more tumefied, asperate, and abbreviated, the Muscle swelling and enlarging in its belly, and the inward Tendons as being of themselves immovable, being neither changed in length or thickness; only drawn up by their *Fleshy Fibres*; whence may be collected, that the *Animal Spirits*, when they perfect any Muscular motion, they do generally perform this between the *Fleshy Fibres*. Now shall we disclose some difficulties which do and may arise as *Knotty Disputes* about Muscular Dissection, and Muscular Motion, and how these Spirits do operate so tacitely without any incitement thereto; How they fill these *Fleshy Fibres*, and so seeming to shorten their *Tendinous Fibres*, for the producing of which effects, the plenty of these Spirits arising from these *Tendinous Fibres*, are not altogether sufficient for performing and managing this, and therefore do require others as its adjutants or assistants to promote and further the same in its design, both in occasioning mutual Rarefaction, and Tumefaction, or suddain Inflation of those Bodies which do occasion this Abbreviation.

That the *Fleshy Membrane* of the Muscle doth tumefie when its contracted, is without all doubt, and beyond all dispute, for this is apparent enough to sight and touch in *Vivisection*; all the *Fleshy Fibres* being corrugated together, and are more tumefied, and do appear more asperate, hence cometh its abbreviation; the Muscle appearing both more thick and more broad, hence therefore may we justly conclude, that Muscular Motion in general may probably be granted; As that the *Animal Spirits* being derived from the Brain by the conduct of the Nerves, and thence conveyed into the body of every Muscle, and from hence by commerce do pass to the

d

Tendinous

The Epistle to the Reader.

Tendinous Fibres, and do at length get quarter there, and entertainment, as in other *Promptuaries* or *Mansions*, the which *Spirits* being in their nature very active, so fast as their vigour will permit them, they do expand themselves, and penetrate into the *Fleshy Fibres*: and continuing this their course, they at length do arrive at the *Tendons*, and having once entred them, they do therein proceed in the same method: and that the *Animal Spirits* flowing from the *Tendinous Fibres*, do equally pass under the *Fleshy Fibres*, is very apparent; in that it is granted that in every *Muscle* there is allowed two *Tendons*, whose opposite *Angles* are so framed, that these *Animal Spirits* running from a double top do fill the whole *Body* of the *Muscle*; and the motion hence taking its *Origination*, doth very speedily receed, if the contraction ought to be made indifferently towards the middle *Fleshy* parts: the *Tendons* are generally equal, but the motion most inclinable towards one part of the *Flesh*: and hence may we collect, the regular or irregular motions of a *Muscle*, every regular or irregular motion hereof granted to arise from either the *Cerebrum* or *Cerebellum*, it being thence dispatcht by the *Nerves*, and so sent into the *Muscles*, the effects and consequences whereof do evidently evince and demonstrate. Thus have I a little presumed to enlarge upon the *Readers Epistle*, as touching the use and benefit of the *Muscles*, wherein also I have introduced somewhat of *Muscular Motion* according to *Steno*, and have the rather chosen to enlarge the *Discourse* here, the *Body* of the *Treatise* being wholly intended to appear *Publick* and *Concise*, without any *Flourishes* or empty *Enlargements* of *Discourses* or *Controversies*.

Peruse

The Epistle to the Reader.

Peruse therefore this ensuing Discourse with a Candid Interpretation, and pass by all the Literal Elapses you may meet with, and accept these with that Amicable Mind, as they are Dedicated and intended by,

John Browne.

From my House at the
Chirurgeons-Arms at
Charing-Cross,

London.

The

The Names of the Subscribers.

A.

	l.	s.	d.
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Henry Earl of Arlington Lord Chamberlain of His Majesties Household	01	01	06
Henry Earl of Arundel	02	03	00
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John Anderson Chir.	00	10	00

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Profler Balch of Wadham-Colledge	00	10	00
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Robert Poyle <i>Esq</i>	01	00	00
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James Beverly <i>Esq;</i>	00	10	00
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Philip Browne <i>Gent.</i>	00	10	00

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Henry Earl of Clarendon	01—01—06
John Lord Bishop of Chester	00—10—00
Tho. Lord Cromwel Earl of Ardglass	} 01—01—06
Benjamin Calamy D. D. His Majesty's Chaplain	00—10—00
John Clarke D. D. for himself and Colledge	} 01—00—00
Ralph Cudworth D. D. for Corpus Christi-Colledge	} 00—10—00

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100	100	100

	<i>l.</i>	<i>s.</i>	<i>d.</i>
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Nathaniel Coxé <i>Gent.</i> _____	00	10	00

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Г.

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Seth Lord Bishop of Salisbury-----	00	10	00	<i>the Company</i> -----			
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This

This Table sheweth the Names of
the Muscles, as they do arise in Dissec-
tion.

O *Bliquus Descendens*
Obliquus Ascendens
Rectus

Piramidilis

Transversus

Frontalis

Aperiens Palpebram Rectus

Claudens oculum superior

Claudens oculum inferior

Recti Quatuor Oculi

Obliquus Primus Oculi

Obliquus Secundus Oculi

Attollens Aurem

Detrahens Aurem

Adducens Aurem

Abducens Aurem

Externus Tympani Auris

Internus Tympani Auris.

Abducens Nasi alas

Attollens Nasi alas

Claudens nasum externus

Claudens nasum internus

Communis Claudens Alas

Zygomaticus Riolani

Abducens Labios

Deprimens Labii inferius

Constringens Labios

Platysma Myodes sive Quadratus

Buccinator

Masseter sive Mansorius

Temporalis seu Crotaphites

Mastoideus

Biventer sive Digastricus

Coracohyoidens

Sternohyoidens

Sternothyroidens

Hyothyroidens.

Styloceratohyoidens

Pterygopalatinus

Spheno-palatinus

Mylohyoidens Riolani

Geniohyoidens

Miloglossus

Ceratoglossus

Genioglossus

Hypsiloglossus

Styloglossus

Lingualis

Cricothyroidens anticus

Æsophigæus seu Sphincter Gulæ

Stylopharyngæus

Cephalopharyngæus

Cricoarytenoidens Posticus

Cricoarytenoidens Lateralis

Arytenoidens

Thyroarytenoidus

Sphæropharyngæus Primus

Sphæropharyngæus Secundus

Pterygoideus Externus

Pterygoideus Internus

Longus

Scalenus seu Triangularis

Pectoralis

Subclavius

Serratus major Anticus

Serratus minor Anticus

Intercostales Externi

Intercostales Interni

Cremasteres

Erector sive Director Penis

Accelerator Penis

Musculi Clitoridis

Levatores Ani

Sphincter Ani

Sphincter

The TABLE.

Sphincter Vesicae
Detrusor Urinae
Diaphragma.

Here let the Body be turned
upon the Face.

Cucullaris sive Trapezius
Latissimus Dorsi
Rhomboides
Levator Patientiae
Rotundus Major
Suprascapularis Superior
Suprascapularis Inferior
Nonus humeri Placentini sive Ro-
tundus Minor
Subscapularis.

If you intend to take off the
whole Arm with the Scapula,
the Dissection of these fol-
lowing Muscles will with
more ease be performed.

Deltoides
Biceps
Octavus humeri Placentini sive
Coracobrachialis
Brachiacus Internus
Gemellus Major
Gemellus Minor
Anconaeus
Palmaris
Caro Musculosa Quadrata
Flexor Carpi Interior seu Ulnaris
Flexor Carpi Exterior sive Radia-
lis
Flexor Secundi Internodii Perfo-
ratus
Flexor Tertii Internodii Perforans
Flexor Tertii Internodii Pollicis
Pronator Radii Teres

Pronator Quadratus
Flexores Primi Internodii Digi-
torum
Flexor Primus, Primi Interno-
dii Pollicis
Flexor ejusdem Secundus
Flexor Secundi Internodii Pollicis
Primus
Secundus
Tertius
Quartus

Minimi Digiti abductor
Pollicis abductor
Pollicis adductor
Interossei
Extensor Carpi Exterior
Extensor Secundi & Tertii In-
ternodii Digitorum
Supinator Radii Longus
Extensor Pollicis ossis Tertii
Extensor Secundi & Tertii Pol-
licis
Abducens Indicem
Supinator Radii Brevis
Primi Internodii Extensores.

Here you return to the Body
it self as it lies

Serratus Posticus Superior
Serratus Posticus Inferior
Splenius sive Triangularis.
Trigeminus
Transversalis
Spinatus
Recti Majores
Recti Minores
Obliqui Superiores
Obliqui Inferiores
Longissimus Dorsi
Sacrolumbus
Cervicalis descendens
Sacer

Semispinatus

The TABLE.

Semispinatus
Quadratus
Psoas
Psoas Parvus

If you please to take off the Thigh from the Trunk of the Body, by dividing the *Os Ileon* from the *Os Sacrum*, the dissection of the subsequent Muscles will the better be performed.

Iliacus Internus
Glutæus Major
Glutæus Minor
Glutæus Medius
Piriformis sive *Iliacus Externus*
Obturator Internus
Quadrigeminus
Obtuator Externus
Membranofus
Sartorius
Gracilis
Rectus
Vastus Externus
Vastus Internus

Biceps
Semimembranosus
Seminervofus
Triceps
Lividus
Gasterocnemius Externus
Plantaris
Gasterocnemius Internus
Subpopliteus
Flexor Tertii Internodii Perforans.
Tibiaeus posticus
Flexor pollicis
Flexor Secundi Internodii Perforatus.
Adducens Pollicem
Abducens minimum Digitorum
Transversalis Placentini
Tibiaeus Anticus
Peroneus Primus
Peroneus Secundus
Extensor Pollicis
Extensor Tertii Internodii Digitorum
Extensor Secundi Internodii Digitorum
Interossei.

The Names of the Authors concerned in this
Muscular Discourse.

Thomas Bartholinus
Casper Bauhinus
Albertus Columbus
Bartholomeus Cabroules
Isbrandus Diemerbroeck
Galen
Regnerus de Graaf
Hippocrates
Andreas Laurentius

Julius Casserius Placentinus
Johannes Riolanus
Daniel Sennertus
Adrianus Spigelius
Joannes Valverdu
Andreas Vesalius
Joannes Veslingius
Vidus Vidii

Obliquus

Obliquus Descendens.

THis first pair of Muscles with which Nature hath covered the Abdomen, as a Vail, are endowed with oblique Fibres, and by reason of their descent, they have this name bestowed upon them. They do arise from the lower parts of the 6th. 7th. 8th. and 9th. Ribs indented; or indenting themselves with *Serratus Major Anticus*; as also Membranous from the transverse processes of the Vertebres of the Loyns, and part of the *Os Ileon*, and then passing to the *Linea Alba*, and *Os Pubis*, by a broad Nervous Tendon marches into the middle of the Abdomen; (its very hard to separate this Muscle from its subjacent Tendon without laceration) it adhering so closely to it. This Tendon with its next neighbour being either lacerated or dilated, and the *Omentum* or *Intestines* hereby making a prolapsion either into the *Inguen* or *Scrotum*, does occasion either an *Hernia Omentalis*, or *Intestinalis*. To dissect this Muscle exactly, you must divide the *Latissimus* from him very low, so as that you may attain his Lumbal Origination the better.

This doth laterally compress the Abdomen.

Obs.

The chief use of this Muscle, as *Columbus* and *Laurentius* do affirm, is to contract the *Thorax*, as sometimes upwards; hereby assisting Respiration. *Laurentius's* observation of these Muscles is worth note; when he writes that these Abdominal Muscles are quite contrary to the other Muscles of the Body, these being crooked before they do Operate, and do turn inward in their Operations, hereby with much facility compressing the inward Cavities; the which, by reason of the laxness of the lower Belly, and its yielding to vacuity, it frames a Contention inwards, and a Remission outwards. Another Observation may be, that these Muscles do bind the *Intestines* in oblique descending Angles.

Its use.

Obs.

The Explanation of the First Table.

- B** *Part of the Muscle called Ani-scalptor.*
D. Musculus Pectoralis in situ.
C. Serratus Major Anticus.
G.G. I.I. K.K. K. Musculus obliquus descendens.
G.G. *Shews the Fleshy part of this Muscle.*
a.a.a.a. *Shews its Connexion with Serratus Major.*
I.I. *Shews another part of the same Muscle.*
K.K.K. *Shews another Fleshy part of this Muscle, with its Tendon and where it begins, and how it is expanded into the Linea alba.*
V.V. *Shews the Semilunary Line.*
L.L.L. *The Tendon of the Oblique descendent Muscle running over the right Muscles of the Abdomen to the Linea alba.*
M.M.M. *The White Line into which this Tendon is inserted.*
N.N.N. *The Intersections of the Right Muscles.*
P.P. *The Spine of the Os Ileon.*
Q. Q. *Some heads of the Muscles moving the Thigh.*
-

Obliquus

TAB. I.





Obliquus Ascendens.

THis is immediately substrated to the former, and is furnished with Ascendent Fibres, it ariseth fleshy from the Appendix of the *Os Ileon*, and Membranous from the processes of the same Vertebres as the former; and so ascending into the 11th. and 12th. Ribs with a fleshy Margent, then extending himself into a large double Tendon in which the *Rectus* is conveyed, proceeds to the *Linea alba*, and Semilunary Line, and is implanted into the 9th. 10th. 11th. and 12th. Ribs. Observe that this Muscle is best rais'd by finding the Nerve that runs between this and the Transverse at his Origination from *Os Ileon*. *This doth help the former in its Compression.*

The chief use and action of this Muscle as *Columbus* doth offer, is, That these working together, they do detract the Muscles of the *Thorax*. Nature planting here a Series of Fibres contrary to the former, and these being by her thus made for a stronger Compression. *its use.*

Moreover as I humbly conceive, that this Oblique ascending Muscle is obliquely perforated near the *Os Pubis*, by the Cremasters and the Spermatick Veins and Arteries a little above the perforation of the Oblique descending Muscles; so that these Oblique ascending Muscles lodging just under the former, do run counter with them in their Fibres, and do keep them in Oblique ascending Angles. *obs.*

Moreover, that whereas the various Muscles of the Abdomen several ways contracting themselves inwards, do force the Excrement downwards, and at the same time do reduce both the Ventricle and Intestines into their proper places, and are Antagonists to the *Diaphragma*, because in its motion in order to enlarge the capacity of the *Thorax* to give reception to the Lungs tumefied with Air, the *Diaphragma* is brought towards a plain, and doth thereby both press the Stomach and Intestines downwards, by which, the motion of the Chyle is gently solicited into the *Ductus chiliferus*. And when the *Diaphragma* hath done playing, these Abdominal Muscles do act their parts, by relaxing the *Diaphragma*, and bringing it into an Arch, the Belly growing lank, and the Intestines and Stomach being forc't inwards, and upwards, by the contraction of the Abdominal Muscles.

The

The Explanation of the Second Table.

A *A. Obliquus Descendens, laid bare.*

B.B.B. The bodies of the Ribs.

9.10.11. The lower Ribs.

a a.a. Shews the Tendinous Membrane of the Oblique descendēt Muscle.

B.B. Obliquus ascendens, in situ, shewing its Ascendent Fibres.

C.C.C. Linea Semilunaris.

iii.i.i. Recti Musculi, Transparent under the Tendons of the Oblique ascendēt Muscle.

Rectus.





Rectus.

THis third pair are cloathed with Right Fibres, being made very strong, and well lin'd with Flesh : They do arise from the *Os Pubis*, and running according to the length of the Body, are inserted into the sides of the *Sternon*, where the last true Ribs have their Cartilages. The Insertions hereof are various, for sometimes there is seen three, sometimes four, and sometimes three and a half ; sometimes all above, sometimes some below ; as also the Anastomosis, of the Mammillary Vessels external, and Epigastrick internal, always found in Women, rarely in Men ; as also the multitude of Nerves sent to the Perigraphs is very observable, for if you find four Perigraphs, you will find no Pyramidal Muscles.

This Muscle brings the Belly forwards.

These Muscles are allowed to be of great use ; some Authors affirming that they do abduce the *Penis* from the Ribs. And when we do arise out of our Beds, these Muscles do seem to tumefie and fill outwards ; others do declare, that these do inflex the *Thorax*, and do draw the Brest to the *Os Pubis*, and the *Os Pubis* to the *Thorax*, and that out of their Contraction, there is seen two various Motions performed.

Use.

But I humbly conceive that these Muscles taking their Origination from the *Os Pubis* and *Sternon*, and inserting themselves into the *Linea alba*, and running all down in length through the middle of the Abdomen, do in their Contraction press the Insertions inwards, and do assist the Peristaltick motion in the exclusion of grosser Excrements.

Or.

The Explanation of the Third Table.

A *A. The Cutis with the Fat laid bare.*
D.D.D.D. *The Right Muscles of the Abdomen.*
e.e.e.e. *The Intersections of these Muscles.*
i i. *The Pyramidal Muscles.*
L.L. *The Oblique Ascendant Muscles in site.*
MM. *That part of the Tendon of the Oblique Ascendant Muscle
which covers the Right Muscle.*
P.P. *The Intercostal Muscles.*

Pyramidalis

TAB III





Pyramidalis or Succenturiatus.

THIS Muscle hath its name from its make, and resemblance it carries with a Pyramidal Figure. It ariseth <sup>This presseth
the Abdomen
downwards.</sup> from the external part of the *Os Pubis* broad and fleshy, and running somewhat below the *Rectus*, is inserted by a long and round Tendon into the *Linea alba*. These Muscles are seen sometimes to be wanting in such Persons as have the Origination of the Ascendent Muscle not from the *Ileon*, but from the strong Ligament which runneth from the Spine up to the *Os Pubis*, internally : and have four Perigraphs in the *Rectus*.

Vesalius, *Adernaus*, and *Columbus* do all describe them (though badly) to arise from the beginning of the Right Muscles ; But that these are distinct Muscles are evidently apparent.

Fallopins the Inventer of them, doth ascribe the action of ^{Their Use.} Compression to them ; and that they do promote the Excretion of Urine, this also he doth affirm. *Laurentius* does observe, that if one of these Muscles doth work alone, it draws the *Linea alba* obliquely downwards ; if they do work together, they do work it directly downwards, and do hereby compress part of the Inguen and the Bladder, when we at leisure do discharge our Urine. *Columbus* will have these Muscles somewhat to add to the Erection of the Penis, but his Opinion is much contradicted by *Flud* from their Situation : for they cannot reasonably be allowed to serve for this use, because they do in no measure reach this part, and are also apparent in Women.

The Explanation of the Fourth Table.

A *Shews the Muscle Obliquus Ascendens*
B B. *Demonstrates its Tendon.*
C.C.C.C. *The Right Muscle of the Left Side, shewing the Tendons*
Duplicature.
K.K.K.K. *The same Muscle of the Right Side.*
d. *The Transversus Muscle of the Abdomen.*
e.e. *The Pyramidal Muscles.*

Transversus.

TAB. IV.





Transversus.

THis fifth Muscle firmly annexed to the adjacent *Peritonæum* is framed of Transverse Fibres, it ariseth from ^{This brings the Abdomen inwards.} the Transverse processes of the Loyns and the *Os ileon*, and the Cartilaginous inward part of the lower Ribs with a Nervous Membrane, from the same Ligament as the former; as also with a Flethy Origination from the inward part of the Spurious Ribs, and Terminates in a broad Tendon at the Semilunary Membranes, the *Linea alba*, and so down to the *Os Pubis*; he adheres firmly to the adjacent *Peritonæum* in a manner all along, save only in the *Pubes*, where he divides himself. *Bartholinus* declares, that its chief use is to Compress the Colon. Its generally agreed by all Anatomists, that these Muscles do serve for bringing the Abdomen inwards; the which action is very necessary in the Contraction of the lower Belly. *Spigelius* allows it another action, which is, that it moves the *Thorax* Circularly to the Sides, hereby promoting and cherishing the Native Heat; These Muscles also being of a moderate thickness, do serve as a defence and covering to the subjacent Parts

This Transverse Muscle is obliquely perforated a little above the Oblique ascending Muscle, by the Cremasters, and Spermatick Veins and Arteries; so that the perforations of the Oblique Descending, and Ascending Muscles of the Abdomen being framed one above another, not in streight but in bevil Lines, do intercept the passage of the Intestines falling into the Scrotum. These Transverse Muscles running the breadth of the Abdomen cross-ways, do run counter to the Fibres of the Right Muscles, which binds in the Intestines crossing the length of the Abdomen downwards long-ways, as the Fibres of the Transverse Muscles running overthwart, do in their Right Angles secure the Intestines in their actions broad ways, and cross the Abdomen.

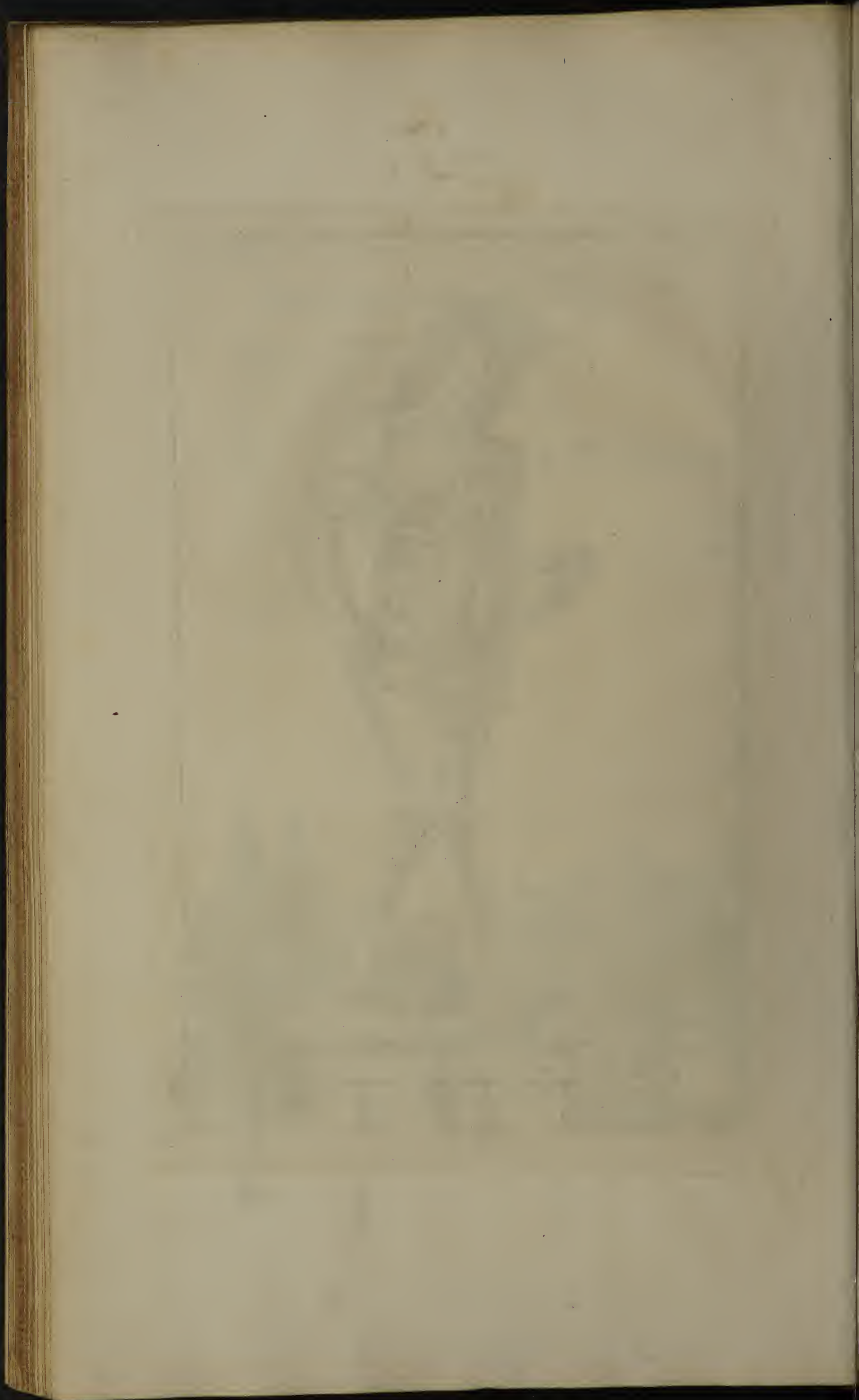
Obs.
C.

The Explanation of the Fifth Table.

- A** *A. The Inward face of the Right Muscles.*
B.B. Another of the same cut in pieces.
e.e. The Pyramidal Muscles laid bare.
F.F. The whole Muscle, Transversalis in situ.
e.e. Shews its first beginning.
G.G.G. Nerves sent to this Muscle from the Spinal Marrow.
A.A.A.A. Branches of Veins and Arteries of the Eight Muscle,
transmitted into this Muscle.
I.I.I. The same Muscle laid bare.
h. Shews its Tendon laid bare also.
K.K.K. Part of the Peritonæum to which part of this Muscle doth
closely adhere.
L. The Navel.
O.O.O. The Intercostal Muscles.

Frontalis.





Frontalis.

HAVING cleared all the Abdominal Muscles, which in necessity did require the first use of the Knife: we next come to those parts which in order of Dignity do deserve our Inspection; And here begin we with *Frontalis*, which Muscle doth act variety of postures in Human Bodies, and hereby are excellently delineated the Pictures of Sadness, Joy, Sorrow, and Mirth, these being the Passions of the Mind; and are by this Muscle extreamly well Decyphered. This Muscle ariseth from the most elated part of the Forehead, where the Hair ends near the Temporal Muscle, and where the Carnous Membrane adheres most firmly to the Cranium, and running right down, is inserted into the Skin which covers the Eyes, and into the Eyebrows; In raising this from the Cranium, you will find Nerves sent from the Cranium to him.

This being raised up, it opens the Eye with it: its framed of Right Fibres, and therefore lies as a good Caution for every young Chyrurgeon that he makes no transverse Incision here, lest by neglect thereof, he purchase the utter downfall of the upper Eyelid. To this Muscle by late Anatomists are added the two *Occipitales* which do arise from the middle of the Occiput, and passing by the Muscles of the Ears, tends to the aforesaid *Musculus Frontalis*: though these do not appear so well in all Subjects, yet they do counterpoise in some measure. The proper use of these is to draw the Skin backward, and to keep the Forehead streight and smooth, that so it may not be too subject to Wrinkles, by the frequent action of the former.

This Muscle you have very well described at *Tab. 6. Fig. 1.* at *A. A.* at *Tab. 7. Fig. 3.*

i. At *A.* Shewing the same *in situ*.

a a. Shewing its beginning.

V. V. Its Termination.

A. At *Fig. 2.* The same Table shews the same Muscle.

Aperiens.

Aperiens Palpebram Rectus.

*This lifts up
the upper
Eyelid.*

THere are two Eyelids belonging to either Eye, the upper of which is moved upwards and downwards, both for the opening and shutting of the same; the first designed for Sight, and the second appointed for maintaining its Vigour. This Muscle ariseth from the upper Orbite of the Eye, near its Elevator, where the Optick Nerve hath its transmission: arising with a thin and fleshy beginning, and is expanded with a broad and thin Tendon into the Margent of the Palpebra, and taking the same up, doth open the Eye; this is not to be shewn but with the other Muscles of the Eye after it is taken from the Cranium. *obs.* This Muscle and the next following, have their distinct Originations and Insertions, although their Muscular Fibres do seem to unite, which hath made some Physicians conclude them to be both but one Muscle; the which on the contrary by accurate Demonstration, is shewn that they have two distinct Nerves taken into two distinct places; for the upper takes a small Nerve from that Motion which arises out through the Cavity of the upper Orbite, the lower assuming its small Nerves from that which it produceth through the Cavity of the lower part of the Orbite, the which Physicians have observed in a Cymical Spasm of the Face: wherein the lower Eyelid is seen to appear as it were immoveable, convel'd and drawn downwards, whilst the upper doth move Naturally; The which could not succeed if they both should be moved by one Muscle.

This Muscle you have very well explained at *Tab. 7. Fig. 1.* at *B. C.* and at *Tab. 6. Fig. 2.* at *I. I.*

Claudens.

Claudens feu Semicircularis superior
Deprimens.

THis ariseth with a sharp beginning from the inward Angle of the Eye, and from part of the Eyebrow near the Nose; and so falls somewhat transverse towards the Exteriour part of the Eye, becoming fleshy, and so broad, as that he possesseth the whole space between the Eyebrow and the Cartilage out of which the Hairs of the Eyebrow do grow, and is inserted into the Angle of the Eye. *This shuts the Eye.*

Julius Casserius, Sect. 1. de Organ. cap. 8. doth describe these Indications drawn from the Palpebra, as that such as have their upper Eyelids elated, to be Proud and Fierce; those who have them deprest, to have their Eyes as it were half shut, these generally accounted to be of a mild and humble Nature and Disposition. *Use.*

This Muscle you have described at *Tab. 6. Fig. 2.* at *I. 1.* at *B. B. Fig. 1.* at the same Table, and at *Tab. 7. Fig. 1.* at *B.* and *B. Fig. 2.*

D

Inferior

Inferior seu Attollens Semicircularis.

The nether is
lifted up by
this.

THis ariseth being Membranous and thin from the top of the Nose near the Angle of the lower Eyelid, with a sharp point; and carried transverse about the middle of the Lid, becoming fleshy, and is inserted into the same Angle as the other. Amongst Authors there is held a Dispute, whether that these two Muscles be not properly one, and that *Orbicularis* being so generally received; though the one doth depress, and the other attol or lift up, at the same time to make a perfect close over the Eye.

These Muscles are as Drawbridges for the Eye to open and shut; and as the first doth produce its perfect Sight by being drawn up, so doth the other procure its ready Rest and Quiet by as perfect a closure.

Use.

To these *Riolanus* doth add *Musculus Ciliaris*, which he would have serve to the more firm closure of the Eyelids; but this depends rather on his Fancy or his Knife, than any Foundation in Nature: nor is there need of such a Muscle, since that Office is sufficiently performed by the two forementioned; if they be not one Orbicular Muscle, as some suppose, and consequently by their Circular Fibres constringe as firmly as a Sphincter does.

Both these you have described at *Fig. 1. Tab. 7.* at *C.* and at *B. Fig. 2.* in the same Table.

Rectus

Rectus Oculi Primus Elevator.

THe Curtains of the Eye being drawn, we next arrive at the Body of the Eye its self with its Muscles, by which it performeth all its variety of Motions; the truth is, so much hath already been said of these Muscles, as well as of the Coats and Humours which belongeth to the Eye, that its lost time to trouble you with Repetition thereof; this only I shall offer, that this fine Globulous Body ought to have so many Muscles as it enjoys, to make it hang so perpendicularly in the Orbit of its Bone, and be so well ballanc'd, as that it may perform every of its Motions with dexterity, and thereby with ease and advantage execute those Offices for which it was at first designed.

This Muscle ariseth from the upper part of the Orbit of the Eye, near where the Optick Nerve comes forth, and is inserted into that Coat of the Eye called *Cornea*, where it is clear, and near the Iris by a thin and Membranous Tendon.

This Muscle amongst Anatomists is generally accounted the first of the Eye, and is either called *Attollens* or *Superbus*, being held the Master of Pride and Disdain; the expressing of which Action occasions the Eye to open. Dr. *Willis Fol. 149. de Anima Brutorum*, doth attribute this Motion to the Eyelid rather, and by him is called *Musculus Humilis*, because in a devout and intense Prayer it is much lifted up, and hence is it that we commonly see the Hypocritical Tribe, who do affect a form of Sanctity to lift their Eyes so much up, that scarce any part but the White thereof is seen, the Pupil in these Creatures being so obscured that scarce any part thereof is to be seen.

This you have very well delineated at *Tab. 6. Fig. 3.* at *G. G.* and at *Fig. 5.* in the same Table at *A.*

Rectus Secundus five Depressor.

*This brings
the Eye
downwards.*

THis is by some Anatomists called the second Muscle of the Eye, and is so far from advancing it, that it brings it down; and hence hath it the name of *Humilis* given it, by some also it is called *Deprimens*, shewing by its Action and Motion the Index of an humble and submissive Temper and Constitution; it is opposite to the former, and is lesser, arising from the lower opposite part of the same Cavity, and hath its insertions as the former, it brings the Eye towards the Chin; This Muscle you have exactly described in *Tab. 6. Fig. 3.* at *H.* and at *D. Fig. the 5th.* of the same Table.

obs.


This Muscle is less than the former, which is its Antagonist Muscle, though their powers hereby are not rendred unequal; because there is less force required to depress than to elevate, and therefore we see it happen in like manner in other parts of the Body. And indeed our great Architect has hereby admirably provided for a due balance of the opposite Muscles; for where there is an excess of power or action on either side, we usually see a Spasm succeed: as happens in the following Muscle, (or *Adducens*) which in Children is so often contracted by a vicious turning their Eye inward upon drinking, or otherwise, that it occasions that deformed Squinting or cast of the Eye, the which on the account of the Pliableness of the opposite Muscle they are so prone to in their tender years, over what they are in a more confirmed Age.

Rectus

Rectus Tertius sive Adducens.

THis third Muscle of the Eye doth arise from the Orbita ^{This brings the Eye in-} of the Eye near the Origination of the Elevator, sub- ^{wards.} sisting in the inward Angle, drawing the Eye inwards towards the Nose; This Muscle by some Authors is called *Bibitorius*, and amongst good Fellows great respect is given to this Muscle bringing their Eye towards their good Liquor; bringing the Eye towards its inward Angle, and making it hereby look somewhat a Squint. Dr. *Willis* in his Book *De Anima Brutor. cap. 15. de Visu*, makes mention of a Young man ^{obs.} troubled with the Palsie, who when his other Muscles of his left Eye were relaxed, this *Adducens* was strongly contracted, and hence his Eye was so distorted, that its Object seemed as it were double, neither could he distinguish any thing very well with it.

This Muscle you have excellently described at *Tab. 6. Fig. 2.* at *G.* at *Fig. 3.* at *I. I.* in the same Table, and also at *Fig. 5.* of the same Table at *B.*

E

Rectus

Rectus Quartus sive Abducens.

*This brings
the Eye out-
wards.*

*Obs.
G.*

THIS Muscle by Anatomists is sometimes called *Abducens*, and likewise *Indignator.us*, from its cross and scornful Effects it carries with it, bringing the Eye outwards. This Muscle ariseth from the External Angle of the Eye, and is inserted as the former: the Eye is drawn inwards by these four working together, and the motion is as it were suspended, which by Physicians is called a Tonick Motion. In Dissection of a Monkey, all these Muscles perfectly appeared exactly as in a Human Eye: and which is observable in these Creatures distinguishable from all other Brutes, these have no *Musculus Suspensorius*, or *Septimus Brutorum*.

This Muscle you have also exactly described at *Tab. 6. Fig. 2.* at *H.* and at *K. K. Fig. 3.* and at *C. Fig. 5.* of the same Table.

Obliquus

Obliquus Minor five Inferior.

THis Muscle ariseth from a Chink which is in the lower part of the Orbit of the Eye, in his Origination Flethy, small, and not altogether round, and is carried Obliquely in his whole course, and ascending by degrees to the upper part of the Eye, is there inserted by a short but Nervous Tendon, near the Tendon of the *Abducent* Muscle; not far off which, the Tendon of the other Oblique Muscle hath also its insertion, and by moving the Eye downwards, it doth convert and abduce it towards its External Angle in a rowling manner.

*This brings
the Eye to-
wards its
External
Angle.*

Use.

This Muscle also you have described at *Tab. 6. Fig. 3. at L.* and at *Fig. 5. at E.* in the same Table.

Obliquus

Obliquus Major vel Superior cum Trochlea.

*This carries
the Eye to its
inward An-
gle.*

THis ariseth from the same place with the *Abducent*, and marcheth in a right Line to the External part of the Internal Angle, where it grows indifferently thick, and is then attenuated and grows round, and goes through a Pulley there designed for it, the which so soon as it hath past it, it, yet so bends its self that it makes the Right Angle of the Eye; and running upwards it begins to grow Oblique, and passing by the *Levator* is inserted between the *Abducent* and Oblique Muscles, as is before demonstrated. The *Trochlea* or Pulley is a perforated Cartilage, passing to the Bone of the upper Mandible, near the inward Angle of the Eye; These two Muscles are called *Amatorii*, or the Lovers Muscles, being as the true Messengers of Affection, by some they are called *Circumactores* or the Rowling Muscles, for they do much work in Human Body: in Sheep also they are of very great use, being given them as their chief Watchers, or those which do work their Eyes about. The young Chyrurgeon is here cautioned, that in his Curing of *Fistula Lachrimalis*, he takes great care of this Muscle. The use of this Muscle is to turn or rowl the Eye inwards towards the inward Angle of the Eye by a Circular Motion, and so to abduce the Pupil from the *Nares* or Nostrils; several Fibres do pass from the *Periostium*, or inward Film of the Orbit to the forementioned *Trochlea*, and according to some do constitute the *Musculus Trochleæ*, though the use of them seem designed for a steddly fixing the *Trochlea*, rather than for a Muscular motion.

Caution.

Use.

Obs.
Q.

This Muscle you have also exactly described at *Tab. 6. Fig. 2.* at *D. E. F. D.* shewing the Muscle *E.* the *Trochlea*, and *F.* the chord of this Muscle; at *Fig. 3.* at *M. M.* you have it, and at *E. Fig. 5.* you have it again very exactly delineated.

 Attollens Aurem.

AS the Eyes are placed in the forepart of the Head as Watchmen to guard the Body, so also hath our wise Creator planted two Ears at the sides thereof for the better perception of Sounds, and a more ready passage to hearing, to the better performance of which there are hereto given variety of Muscles; amongst which, this is reckoned as the first, it arising from the External Termination of the Frontal Muscle, and so being thin and Membranous, is carried over the Temporal Muscle, and is inserted growing narrower into the upper part of the Ear, moving it upwards and forwards.

*This carries
the Ear up-
wards and
forwards.*

This Muscle you have exactly delineated at *Tab. 6. Fig. 4.* at *H.* and at *S. Tab. 7. Fig. 1.* you have the same again.

use.

 F

 Detrahens

Detrahens Aurem.

*This moves
the Ear
downwards.*

THis Muscle ariseth Fleshy, broad, and sometimes Fibrous, from the back part of the Head, near the Mammillary process, and so growing narrower in its progress is inserted into the whole Cartilage which encompasseth the Ear; be careful in raising the *Cutis* lest you take up this Muscle with it, and so loose him; this moves the Ear downwards and forwards, this Muscle is by some allowed as part of *Quadratus Buccas Detrahens*.

Use.

This you have shewn you at *Tab. 7. Fig. 1.* at T. T. T.

Adducens

Adducens Aures ad Anteriora.

THis is a common Muscle, being part of that which *Spi-* This draws
the Ear
forwards.
gelius calls *Quadratus Buccas Detrahens*, and is also al-
lowed as part of that Muscle called *Platysma Myodes*,
from whose insertion you will find a Flethy and Fibrous Elongation implanted into the Root of the Ear.

This Muscle is said to draw the Ear forwards and somewhat upwards. Expect to meet this at *Quadratus Buccas Detrahens*, as being a part of it. use.

Abducens

Extremus

Abducens Aurem ad Posteriora.

*This brings
the Ear
backwards.*

THis Muscle is planted at the *Occiput*, and ariseth above the Mamillary processes from a Knot of Muscles which belong to the *Occiput*, with a narrow beginning, and being carried downwards transversely, is inserted with a double and sometimes treble Tendon into the hinder part of the Ear. This Muscle is said to draw the Ear backwards : In Beasts, as in Horses, Oxen, and the like Bruits these Muscles are much more large and apparent, and oft times more numerous, whence it is, that these can move their Ears more powerfully, and act those strong motions with them which we see is customary for them to do.

This you have described at *Tab. 6. Fig. 4. at I. I. I.*

Externus

Externus Tympani Auris.

THe inward Ear hath two Muscles allowed it, found out by the two excellent Anatomists *Hieronimus Fabricius de aqua pendente*, & *Julius Casserius Placentinus*, and of these one is planted outwards, the other inwards; and from hence they do take their names; this ariseth from the upper and inward passage of the Auditory passage with a large Origination, and becoming Fleshy is inserted externally by a short Tendon into the *Tympanum*, extending the Membrane with the *Malleus* upwards and outwards. *Spigelius* saith it is small and ariseth from the *Cutis*, and that Membrane which covers the Auditory passage.

*This brings
the Tympa-
num up-
wards and
forwards.*

Use.

This Muscle is one of the least in the whole Body, and is to be shewn entire with some difficulty; great caution therefore is to be used in opening the *Os Petrosum*, about that part which respects the Temples, whether it be done by the small Chissil or Filing, that so the pieces of Bones being taken out by degrees, this Muscle may receive no prejudice; the like care is to be observed also in shewing the following Muscle.

Use.

This Muscle you have exactly shewn you at *Tab. 6. Fig. 6.* at *A.*

G

Internus

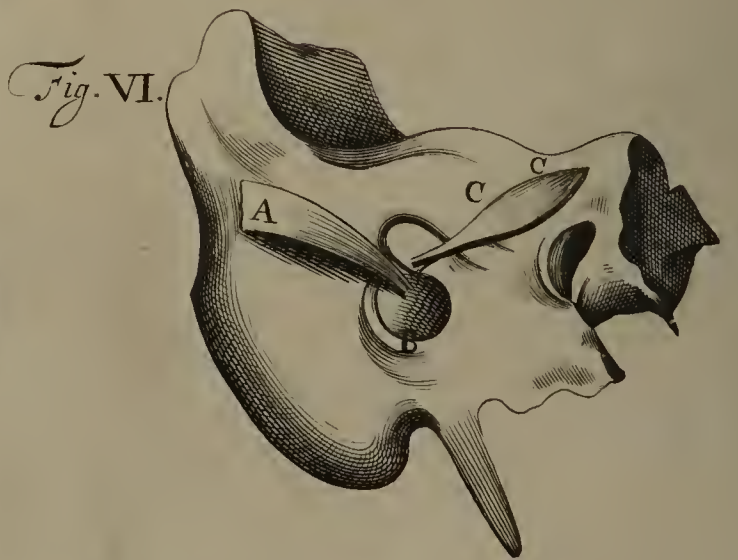
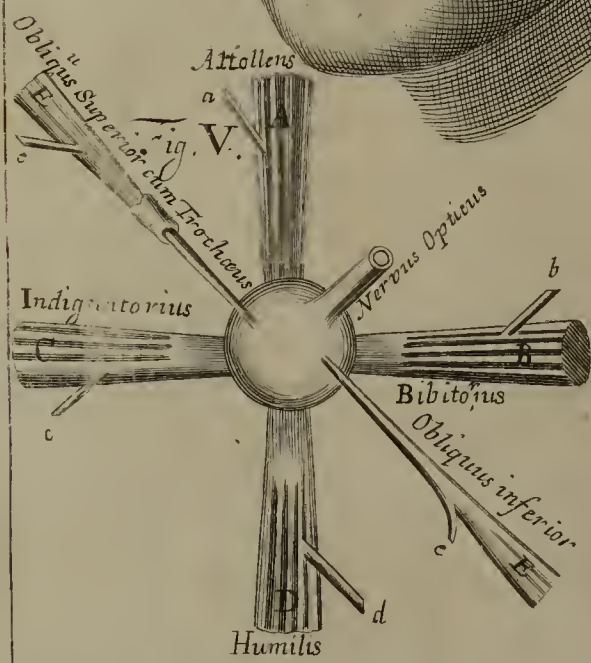
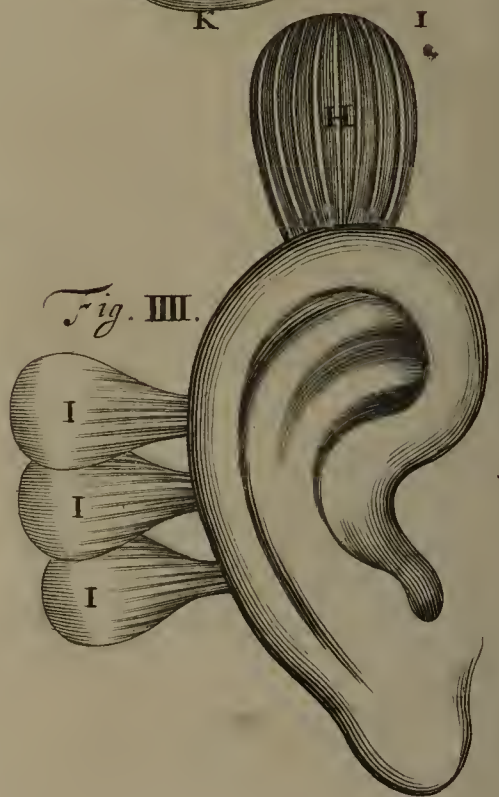
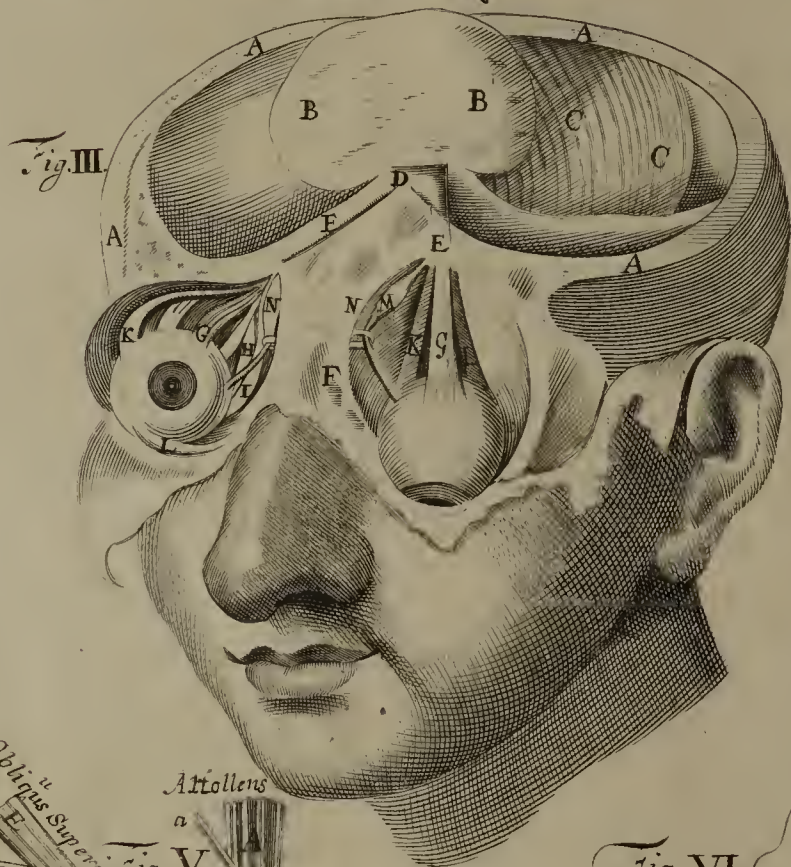
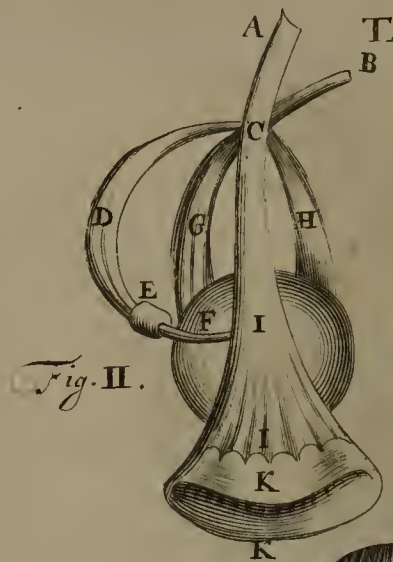
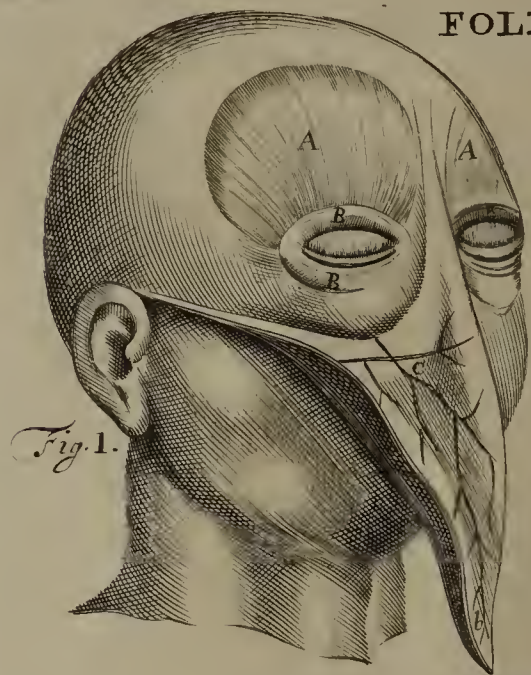
Internus Tympani Auris.

THis Muscle is inwardly planted, seated in the *Os Petrosum*, having its Origination from the Basis of the *Os Cuneiforme*, and so becoming Flethy, though thin and small, and having made half his progress, divides himself into two very small and very thin Tendons, the one of which is implanted into the upper process of the *Malleus*, the other into the Neck thereof, drawing it obliquely forwards, and bringing it somewhat inwards.

These two Muscles do then first move the Membrane with its small Bones upwards and downwards, when we would carefully listen or hearken to any important Matter, &c. Matter or Concern, as *Diemerbroeck* observes. *Dr. Willis Fol. 133. de Anima Brutorum*, writes, that the action of this Muscle is involuntary, and is wrought about by some Instinct of Nature; for when a very vehement sound doth approach the Ears, this Muscle doth remit its great noise, so as that it does sensibly obtund the relaxed *Tympanum* more powerfully; but if it be either more thin, or more obtuse, this contracted Muscle doth distend the *Tympanum*, so that this obtuse Impression may be made more sensible.

This Muscle also you have exactly described at *Tab. 6.*

The



The Explanation of the Sixth Table.

FIG. I.

S Hews at *A. A.* The Frontal Muscle.
B. B. The Muscles of the Eyelids.
b. c. The Membrana Carnosa laid bare.

H. Deprimens of the Right Eye.
I. I. Adducentes.
K. K. Abducentes.
L. Obliquus Externus.
M. M. Obliquus Internus.

FIG. II.

A. The Optick Nerve.
B. The Motory Nerve.
C. The Exortion of the Muscles.
D. Musculus Trochlearis.
E. The Trochlea.
F. The Chord of this Muscle.
G. Musculus Adducens.
H. Musculus Abducens.
I. I. The Muscle of the upper Eyelid.
K. K. Shews them cut off.

FIG. IV.
H. Musculus Auriculam recta sursum Movens.
I. I. I. Musculus Triceps eandem sursum trahens.

FIG. V.

A. Attollens.
a. Shewing its Nerve.
B. Bibitorius.
b. Shews its Nerve.
C. Indignatorius.
D. Humilis.
E. Musculus Trochlearis, or Obliquus Superior.
F. Obliquus Inferior.
o. The Optick Nerve.

FIG. III.

A. A. A. A. Shews the Cranium resected.
B. B. Part of the Brain.
C. C. The Cerebellum.
D. The uniting of the Optick Nerves.
E. E. Their progress to the Eyes.
G. G. Musculus Attollens.

FIG. VI.

A. Externus Tympani Auris.
B. Membrana Tympani.
C. C. Internus Tympani Auris.

enallora

Abducens

Abducens Nasi Alas.

*This dilates
the Nose.*

THe Nose is the Organ of Smelling, and this gains place in the more eminent part of the Body, for the better susception of the ascent of Vapours and invisible Hala- tions, and their Qualities are sent up hither by the Olfactory Nerves to the common Sensory, and are there approved of ac- cording to Judgment ; and thus is Man brought into a capa- city of either taking or refusing such things as may prove either beneficial or prejudicial, purchased without the Eye, and per- ceived without the Ear ; The Nose is not wholly moved, but rather its lower parts which we call *Alæ*, and these are either kept open or shut by the benefit of Muscles : and these are called either *Abducentes* or *Adducentes*, or if you please *Ape- rientes* or *Claudentes*.

use. This Muscle ariseth very small and Fleshy from *Os Maxillæ Superioris*, near the first *Par Labiorum proprium*, and is inserted into the lower and upper part of the *Alæ*, and moveth either part upwards.

This you have exactly delineated at *Tab. 7. Fig. 1. at D. in situ*, *e.* shews its Origination, *d.* its Insertion *Fig. 2. id. Tab.* you have the same at *B.*

Attollens

Attollens Nasi Alas.

THis Muscle ariseth from the top of the Bone of the Nose, near the *Lachrymal* Cavity, with a sharp and Fleshy beginning, descending to its sides in a triangular form much resembling the *Greek* Letter Δ . and so descending according to the length of that Bone, is inserted broad and Fleshy into the *Alas Nasi*, and do carry the same upwards; *Casseri* hath found them much resembling Myrtle Leaves, these two pair drawing the *Nasi Alas*, do dilate and open the Nostrils. *This brings it upwards.*

This you have fairly described at *Tab. 7. Fig. 1.* at *E.e.* shewing its sharp and Fleshy beginning, *f* shewing its Termination into the *Alas*, *B.* shews the same in the same Table *Fig. 2.* *Use.*

H

Claudens

Claudens Nasum Externus.

*This Muscle
shuts the No-
strils.*

THese Muscles are very small, and without it happen in very Nasute Persons they are never seen or to be distinguished; the first pair of which is outwards and Fleehy, and so do arise at the Root of the *Alæ*, and so climbing transversely is inserted into the tip of the Nose; and as *Veslingius* judgeth, doth dilate the same, whilst others do affirm that this doth constringe it.

These Muscles are not to be shewn by any Figure, being both so small, and so inwardly implanted.

Claudens

Claudens

H

Claudens Nafum Internus.

THis is much like the former as to its bigness, lodging inwardly under the Membrane which covereth the Nose from the Bone, it ariseth from the end of the Bone of the Nose, and is expanded into the *Alam Nasi*, and doth constringe it; this is very small, and very rarely found out, unless in such Nasute Persons whose general Series of Muscles are very apparent, thicker, and larger than ordinary.

There is also another Constrictive Muscle, which hath gotten the name of *Orbicularis* common to the upper Lip, the which drawing the Lip downwards, doth also therewith shut up and close the Nostrils; And this *Bartholinus* describes in *Fol. 358. Anatom.* where he affirms, That he hath observed an Appendix hereof to descend to the upper Lip, and that in such People who could not lift up their Nose without their Lips.

This Muscle with its former is not to be shewn by Figures, they being so very small.

Zygomaticus

Zygomaticus Riolani, vcl Attollens
Labium Superius.

*This lifts up
the Lip.*

TO Man are given Lips, both for his accommodation of Eating and Drinking; as also for forming his Voice, retention of Spittle, shutting the Mouth and defending the same from outward Injuries; and because all these Qualifications do require a voluntary Motion, they have given to them variety of Muscles to perform the same: amongst which this is nominated one of the third proper pair called by *Riolan. Zygomaticus.*

It ariseth Fleshy from the *Os Sygoma*, with a Fleshy and broad beginning, and running obliquely downwards and forwards is inserted into the side of the upper Lip near *Primus Nasi*, the which doth abduce it to its sides upwards. See this *Riolanus Anatomy.*

This also you have shewn you at the Letter G. at *Tab. 7. Fig. 1.* and at *Fig. 2. id. Tab.* at C. you have the same.

anatomy

Abducens

Abducens Labia. *ide.*

THis ariseth from the *Os Zygoma* Fleshy and round with much Fat, and is implanted into the Lips where they are joyned together: this moves the Lips upwards and outwards, and doth also help the former in their motion; this by some Anatomists is accounted the first proper pair: these Muscles do also draw the Lips to the side, whether either one or both do operate either singly or together.

*This brings
the Lip up-
wards and
outwards.*

Use.

This Muscle you have shewn *in situ*, at *Tab. 7. Fig. 1.* at *H. i.* and *k.* shewing both its Origination and Insertion; the same you have at the Letter *D.* in the second Figure of the same Table.

I

Labium

Labium inferius Deprimens.

*This brings
the lower
Lip down-
wards and
outwards.*

THis ariseth Fleſhy from the lowermoſt and outermoſt part of the lower Mandible, whence running obliquely, it is broadly inſerted into the middle of the Lip, and moves it downwards and outwards; this is called the fourth pair of the proper Muſcles.

This Muſcle hath a part with the firſt pair called *Detrahens Quadratus*, by which it is obliquely moved to either ſide, (*vid*) right or left, as either of them are in Operation, drawing the whole lower Lip downwards.

Uſe.

This Muſcle you have ſhewn at the Letter *I. Tab. 7. Fig. 1.* and at *E.* in the ſecond Figure of the ſame Table.

Par

muscle I

I

Par Labium constringens sive Musculus Orbicularis & Constrictor.

THis is common to either Lip, being framed of a fungous Substance, with Orbicular or Constrictory Fibres, arising from the middle of the Bones of the upper and lower Mandible, and doth form and make the whole Body of the Lips, encompassing the Mouth like a Sphincter, and drawing the Lips mutually to it, the which do firmly adhere to the red *Cutis*, which gives them their admirable Vermilion Dye; as also shews the Paleness of them in Sickness; All these Muscles of the Lips are so closely conjoyned to the *Cutis*, that their Fibres do intersect one amongst another; and hence is it that such a variety of motions are seen in the Lips; and thus have we shewn all the Muscles of the Lips. *Fallopins* hath another pair of these Muscles belonging to the Lips, whose *Cutis* is so closely mixed with the Muscles, that it rather seems to be a Musculous *Cutis* or a Cuticular Muscle.

The Lips are pursed up by this.

This Muscle is also called *Osculatorius* from the use which is made of it.

use.

These Muscles of the Lips have variety of Uses given them for performing their diversity of Actions; as some being designed for shutting the Mouth, others for opening the same; some made for accommodation of Eating and Drinking, and others formed for Ornament of Speech and Love Motions.

This you have fairly shewn you at *Tab. 7. Fig. 1.* at *K. K.* and at *Tab. id. Fig. 2.* you have the same at *F. F.*

Quadratus

Quadratus five Platysma Myodes.

*This draws
down the
Cheek.*

THe first Muscle lying under the Skin of the Neck is called *Quadratus*, from its Figure, and is small and Membranous firmly adhering to the *Cutis*, arising from the Vertebres of the Neck, *Scapula*, *Clavicle*, and *Sternum*, large, broad and thin, with store of Membranous Fibres, and so running up with oblique Fibres, is inserted into the Chin, where both the upper and lower Lips are joyned; and enlargeth himself so far as to make *Adductor auris ad Anteriora*, and because it agrees much with the Chin, it helps forwards the opening of the Mouth; and by its enlarging its self so far as to make *Adductor auris ad Anteriora*, the Ears also may be allowed to be moved by the help of this Muscle; it hath various Surcules of small Nerves belonging to it from those of the Neck; This Muscle being once convell'd there follows a Cynick Spasm.

Caution.

Here's Caution also for the young Chyrurgeon, where he ought to take notice of the Fibres of this Muscle, especially when he may or shall be called to make Incision here; for want of knowing of which upon making transverse Incisions here, and crossing the Fibres and their Ductures, he presently occasions an Avulsion in the Cheeks, otherwise great care must be had to preserve this Muscle; for whether you do raise the *Cutis* from above or below, he adheres very closely to it; In the raising this Muscle, be careful of leaving its Elongation that makes *Adductor auris ad Anteriora*, which you will rarely miss.

This Muscle according to *Riolanus* you have expressed in our 10th. Tab Fig. 1. at F.

euistheuo

Buccinator.

Buccinator.

THis second Muscle which formeth the Cheek is called *Buccinator* from the use that is made of it; it ariseth from the upper part of the upper Mandible, and from the lower part of the lower Mandible, where the Gums begin, and do amplect the whole Cheeks in their seats, being round like a Circle: the proper Coat of the Mouth adheres so firmly to him inwards, that he is scarce separable from it; outwardly he hath a large round Tendon implanted into the midst of him, which hath his Origination from a Glandulous Substance, growing to the *Os Zygoma*, close by the Origination of the Muscle so called.

*This draws
the Cheek in-
wards.*

This Muscle doth not only move the Cheeks with the Lips, but doth also constringe them, and drive the Meat fallen into the Mouth into the Cheeks back again to the Teeth, sending or conveying the Meat thither, until it be better lessened, and made smaller, and a more accurate Contraction of the same be hereby made. *Placentinus* writes, That he hath found a very strong Ligament in the Center of this Muscle; the which arising outwards, and creeping along the *Os Gingivæ*, terminateth into a small and thin Muscle directly opposite to the Cheek; but *Riolanus* denies the same.

Use.

This Muscle if you please may also be allowed as a hand to the Teeth, sending the Meat till it be well Chewed to the Teeth, by which it may the better be lessened and comminuted.

Use.

This Muscle you have shewn you at *Tab. 7. Fig. 1. at F.* and at *P. Tab. ead. Fig. 2.*

K

Maffeter

Masseter five Lateralis, seu Mansorius.

*This draws
the nether
Mandible
laterally.*

Use.

THis ariseth with a double beginning, strong, large, and Nervous ; first from that Suture where the fourth and first Bone of the upper Mandible joyneth ; secondly Flethy from the *Os Jugale*, and is firmly and largely inserted into the lower Mandible External ; This Muscle by reason of its diversity of Fibres given it, doth move the nether Mandible forwards, backwards, and laterally, and as it were about also ; If you throw this Muscle either from its Origination or Insertion, *Temporalis* will appear in its Insertion.

Use.

The proper Use of this Muscle is shewn in Mastication ; it moves to both sides, as to Right and Left ; it takes its name of *Mansorius* from its proper Action : and from its *sit*e, it is called *Lateralis*.

This you have shewn you at *Tab. 7. Fig. 1.* at the Letter *O.* *I.* shews it also at *Fig. 2. Tab. ead.* where *b. b.* shews its Origination, and *c. c.* its Insertion.

Temporalis

Temporalis seu Crotaphites.

THis is the first and strongest of all the Muscles, filling the whole Cavity of the Temple Bones; it ariseth from the *Os Frontis*, *Syncipitis*, & *Sphenoides*, fleshy and Semicircular, and growing narrower in his descention, runneth under *Os Jugale*, with a short but very strong and fleshy Tendon into the process of the lower Mandible called *Corone*; it hath allowed it three Nerves on either side: One from the third, a second from the fourth, and a third from the fifth pair; Wherefore this Muscle being either inflamed, contused or wounded, sharp pains do immediately succeed, and great danger of Convulsion and fear of Death, especially if the hurt do happen about the Nervous part thereof; As touching the *Periostium*, you will find that if you do raise this Muscle carefully, (contrary to the opinion of some) you will meet it under this Muscle, although many have asserted the contrary. The end of this Muscle is the beginning of the lower Mandible, the which it moves and draws upwards, and hereby shutteth the mouth; and by some hence it is called *Attollens*, and is the strongest Muscle of the Body in respect of its bulk. And as *Spigelius* writes, it is furnished with so much strength, that he remembers in his ripe years that he hath lifted up several pounds of Lead by the strength of his Teeth, and carried them therewith. I have seen very great weights brought from the ground by the Teeth and strength of this Muscle, and it has been reported above 200 *l.* weight has been lifted from the ground by them. This Muscle both shuts the Mouth, and constringes the Teeth.

In opening the Temporal Artery, caution is to be used by the young Chirurgeon lest he injureth this Muscle, by cutting too deep, whence fatal Convulsions (or at least a prejudice to Mastication) do succeed. The safest way therefore is, first to make a light incision of the Skin, and then the Artery lying bare may the readier be hit and divided without injuring this Muscle, which lies under it; or at least it will be well to use in this Operation the Lancet that is retuse on one side like the Penknife, and to take the Artery pretty high about that part of the Temples which joyns to the *Os Frontis*.

This you have at *Tab. 7. Fig. 1.* at *L m. m. m.* shewing its Semicircular beginning, *H.* shews the same, *Fig. 2. ejusd. Tabul.*

Mastoideus.

*This draws
the Mandible
upwards.*

Use.

Use.

Obs.

Use.

Mastoidcus.

*This con-
tracts the
Neck.*

THis is one of the eight pair seated in the forepart of the Neck, strong, long, and smooth : it ariseth with a double beginning ; a certain Cavity distinguishing them, one from the *Sternon* Nervous, and the other Flethy from the more elated part of the *Clavicle*, and is obliquely inserted into the Mammillary process by a round and Flethy Tendon.

obs.

This is worthy Note, that in a live Man, especially in thin and aged People, in which it is very conspicuous, that if the whole pair do work, it bends the Head right, but if one of them do only work, this Muscle is only contracted, and this brings the Head forward laterally.

Use.

This you have at *Tab. 7. Fig. 2.* at *K in situ, d. d* shewing its Origination from the *Sternon, e. e.* its Insertion into the Mammillary process of the Temple Bone.

Biventer

Biventer Digastricus seu Graphyoides.

THis is the second pair called *Biventer*, the like of which is not to be found in Human Body ; in the middle of whose Venter it groweth thinner, having as it were two Venters, arising near the Mammiform process : it riseth with a broad and Nervous beginning from the process *Styloides*, and suddenly becoming round, Flethy, and small, so soon as he recurvates under the *Styloides*, he becomes a Nervous round Tendon, and then becomes Flethy again, and is inserted into the middle Interiour part of the nether Mandible, and by drawing the Mandible downwards doth open the Mouth ; the too great descent of which is hindred by its annexed Ligament. And for the better performance of this work, the former Muscle doth help this very much in its Operation.

*This draws
the Mandible
downwards
and opens the
Mouth.*

Provident Nature hath given this Muscle two Bellies, and from thence it got its name, having in its middle an interjacent Tendon, very aptly resembling a *Trochlea* or Pulley ; formed for this use, that whereas these Muscles do not arise from the lower parts of the Neck, but rather bred from the upper parts thereof, they do reflect about the lower parts of the Mandible like a Pulley, drawing the Mandible downwards, and so opening the Mouth.

obs.

This you have shewn at *Tab. 7. Fig. 1.* at *N. Extra Situm*, whose Tendon is described by *N.* and its Venters by *L. M.*

L Coracohyoides.

Coracohyoides.

*This brings
the Os Hy-
oides ob-
liquely
downwards.*

THis Muscle is very thin and long, so that by Anatomists it is held there is not its like to be found in Human Body, for thinness and length; it is endowed with a double Belly by a distinct Tendon: it ariseth with a Fleshy beginning near the Neck of the *Os Scapulae* from its process *Coracoides*, and running under the *Levator Patientiae* of the *Scapula*, is obliquely carried under the *Mastoides*, and there becometh a small round Tendon, and then Fleshy again: and so is implanted into the

Use.

Horns of the *Os Hyoides*, and draws it obliquely downwards; If you leave this Muscle in its Origination at the Dissection of the *Levator*, you will find his Origination perfect.

obs.

This Muscle hath a double Venter, as its former Companion, that the *Jugular* might not be too much compressed by it.

This you have described very exactly at *Tab. 7. Fig. 2.* at the Letters *L. L.* these two Letters demonstrating its two Venters described in their Natural Position; and at *Tab. 8. Fig. 3.* you have the same laid bare at *H. H.*

The



FIG. I

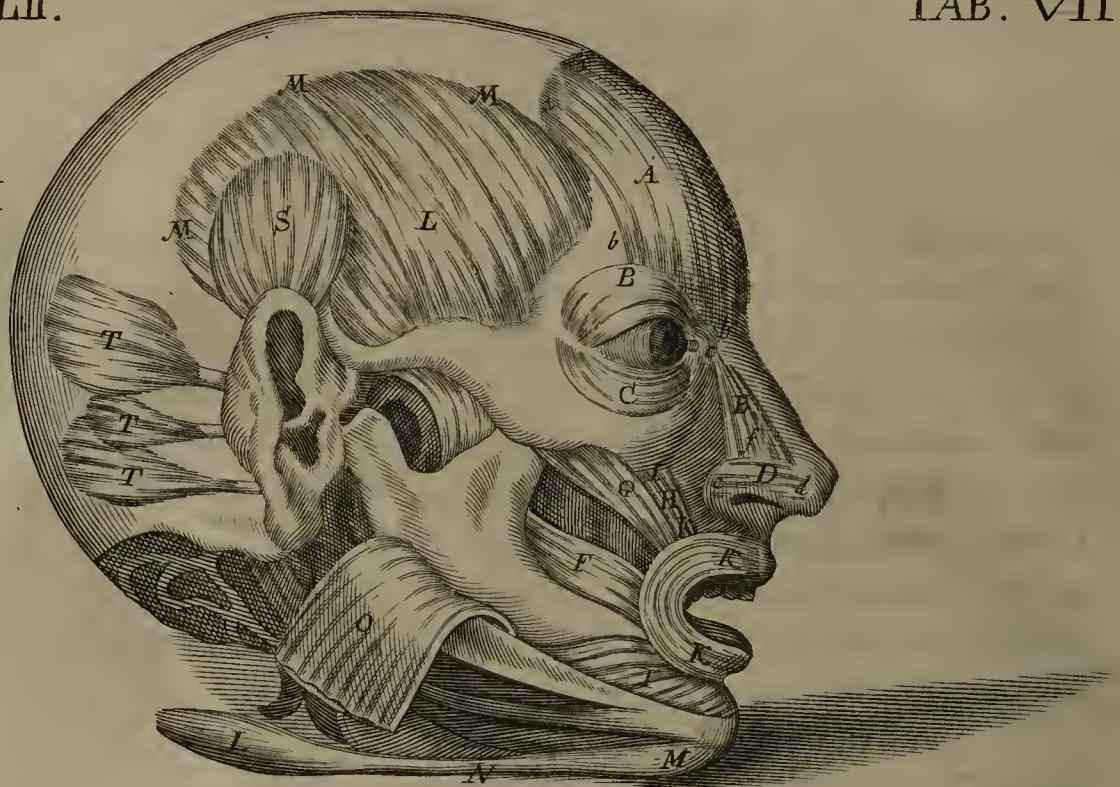
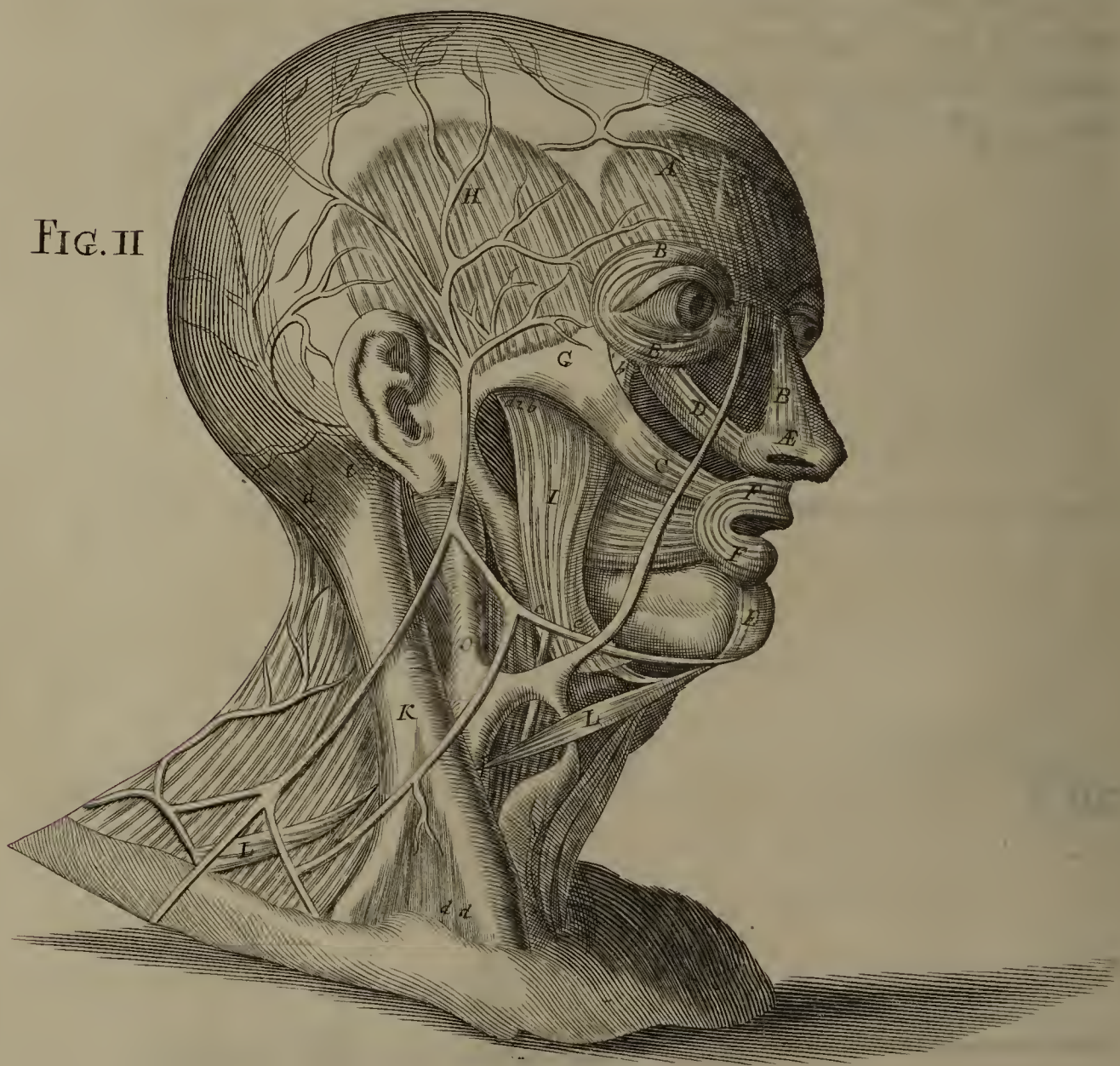


FIG. II



The Explanation of the Seventh Table.

FIG. I.

A *The Frontal Muscle in situ.*
a. a. Shews its beginning.
b. b. Its end or Termination.
B. C. *The Muscle of the Palpebræ.*
D. *Abducens alas in situ.*
c. Shews its Origination.
d. Its Termination.
E. *Attollens Nasi Alas.*
e. f. Shews its beginning and ending.
F. *Buccinator.*
G. *Attollens Labium Superius.*
i. k. Shews its beginning and ending.
H. *Shews the second pair, Abducens Labia.*
i. k. Its beginning and ending.
I. *Labium inferius Deprimens.*
K. K. *Labium Constringens.*
L. *Temporalis.*
m. m. m. Shews its Semicircular beginning.
O. *Lateralis.*
S. *Attollens Aurem in situ.*
T. T. T. *Detrahens Aurem.*

FIG. II.

A. *Musculus Frontalis in situ.*
B. B. *The Muscles of the Palpebræ.*
Æ. *Nasi Alas Constringens in situ.*
B *Nasi Alas Abducens.*
C. *Attollens Labium Superius.*
D. *Abducens Labia.*
E. *Inferius Labium Deprimens.*
F. F. *Par Labia Constringens.*
H. *Temporalis.*
b. b. Shews its two beginnings.
c. c. Shews its insertion into the largeness of the lower Mandible.
K. *Mastoides.*
d. d. Shews its beginning from the Sternon.
e. d. Its insertion into the Mamillary process.
L. L. *Coracoides.*
O. *The outward Jugular Vein.*
P. *Buccinator.*
G. *Shews the Os Jugale.*

Sternohyoides.

Sternohyoides.

*This brings
the Os Hy-
oides down-
wards.*

THese are generally accounted the second pair, moving the *Os Hyoides* downwards and backwards ; This Muscle ariseth broad and Flefhy from the inner part of the *Sternon* under the Skin of the Neck, and running on (the same in substance and breadth all along) the *Aspera Arteria*, and the *Thyreoidal Cartilage* of the *Larynx*, is inserted into the Basis of the *Os Hyoides*.

Use: This Muscle brings the *Os Hyoides* directly downwards and somewhat backwards.

You have this fairly delineated at *Tab. 8. Fig. 2.* at *C. C.* and at *G. G. Fig. 3. id. Tab.*

Sternothyreoides.

Sternothyreoides.

THese Muscles of the *Larynx* (as they call the Head of This extends the Larynx. the *Aspera Arteria*) are so nominated, not because they do move the whole *Larynx*, but its Cartilages; This formerly was called *Bronchus*, but we more properly from its name and insertion do call it *Sternothyreoides* : it ariseth Flethy and broad from the upper and inner part of the *Sternon*, and keeping his dimensions, creeps up with streight Fibres along by the *Aspera Arteria*, and is inserted into the lower side of the Scutiformal Cartilage, the which when it presses the *Scutiformis*, it narrows its *Rima* or Cleft.

It is generally believed that this does close up the lower part of the *Scutiformis*, and that it draws downwards, whence the upper part thereof is seen to be extended, and the *Rimula* or Cleft dilated. use.

This also have you delineated at *Tab. 8. Fig. 2.* at *L. L. N. N.* shews the same at *Fig. 3. Tab. ejusd.*

M Hyothyreoides.

Hyothyreoides.

*This con-
tracts the
Larynx.*

THis ariseth from the whole side of the *Os Hyoides*, at his Basis, and running down broad with right Fibres is inserted into the lowest and lateral part of the *Scutiformal* Cartilage, and by attolling it, doth dilate its *Rima*. *Riolanus* thought this pair not to be peculiarly appointed to any Cartilage, but did lift up the whole *Larynx*; if you raise this Muscle clear from its Origination and Insertion, you will be less troubled to find out these Muscles of the *Larynx*.

obs. This draws the *Larynx* upwards, whence it is we in our selves, when we would frame a sharp Voice, that we then do bring the *Larynx* upwards, and when this is contracted, it contracts the upper part of the *Scutiformis*, driving it inwards.

This also you have delineated at *Tab. 8. Fig. 2.* at *m. m. M. M.* shewing the same at *Fig. 3. ejusd. Tab.*

Stryloceratothyoides.

Styloceratomyoides.

THis third pair ariseth from the Root of the *Processus Styloides*, and being small and round, is implanted into the Horn of the *Os Hyoides*, found infallibly by *Di-gastricus* his running through or under him, obliquely, moving the *Os Hyoides* obliquely upwards. This brings the *Os Hyoides* obliquely upwards.

This draws it obliquely upwards. Use.

Observe that its Insertion is in the lower part of the Horn (or rather towards the Basis) of the *Os Hyoides*.

E. E. Shews this, *Tab. 8. Fig. 3.* *F. F.* Shews the same, *ead. Tab. Fig. 2.*

Amongst these Muscles of the *Fauces*, the two pair lately found out by the Ingenious Doctor *Croune* may not improperly here be mentioned; one of which are named by him *Musculi Pterygo-palatini*, and the other *Spheno-palatini*. The former of these are seated in the Interior part of the Cavity of the *Os Pterygoides*, and terminate with their Tendons (which run on part of the foremention'd Bone as on a *Trochlea*) about the *Glandula palati*, which (together with the *Uvula*) they depress.

The latter of these, or *Spheno-palatini*, arise from the *Os Sphenoides*, and with a broader Tendon are inserted into the sides of the *Glandula palati*, which (together with the *Uvula*) they do attoll. From the situation and action of these latter Muscles may some account be given, how the *Uvula being relaxt* is commonly reduc't by thrusting the Thumb bent toward the Palate or these Muscles.

These Muscles you have exactly shewn you at *Tab. 10. Fig. 2.* at *O. O.* *X. X.* Shews its Tendon, *Q.* Shews the latter, where *f. f.* shews its Tendon also.

Milohyoides

Mylohyoides Riolani.

*This moves
the Os Hy-
oides dire-
ctly upwards.*

THis ariseth laterally from the nether Mandible inwards, under the *Dentes Molares*, Flethy, and is inserted into the Basis of the *Os Hyoides*, externally; this is to be thrown upwards in Dissection. Look into *Riolan.* which doth give you satisfaction as to this Muscle.

Geniohyoides.

Geniohyoides.

THis first pair which from their primary use were called *Recta Attollens*, & *Geniohyoides*, drawing it directly upwards and somewhat forwards, it ariseth internally from that middle part of the lower Mandible called the Chin, and marching down short, broad, and Flethy, is inserted in a proper Cavity, at the Basis of the *Os Hyoides* internally.

This Muscle moves the *Os Hyoides* directly upwards, and somewhat forwards. use.

D. D. Shews this Muscle, *Tab. 8. Fig. 3.* *E. E.* Shews the same, *Tab. ead. Fig. 2.*

N Myloglossus.

Myloglossus.

*This moves
the Tongue
upwards.*

THe Tongue, whereas it is not only the primary Instrument of the Voice, but also is useful for turning of the Meat contained in the Mouth, and doth obtain very many voluntary Motions ; for the executing of each of which, there are required several Muscles, amongst which this is said to be the fourth pair, it ariseth with a broad beginning from the innermost lateral part of the lower Mandible under the *Molares*, and is inserted into the Ligament which ties the Basis of the Tongue to the *Fauces* ; At the Origination of *Mylohyoides* you will certainly find this, and it is best shewn when the Mandible is divided : when one of these move, the Tongue is turned upwards : when both move, the tip is directly lifted upwards towards the Palate.

C. Shews this Muscle, *Tab. 8. Fig. 2.*

Ceratoglossus.

Ceratoglossus.

THis is one of the four pair arising from the Horns of the *Os Hyoides*, and hence it is called *Ceratoglossus*, and is implanted obliquely into the sides of the Tongue, near its Root; if both these work together, they draw the Tongue downwards and inwards: if only one operate, it moves it either to the right or left side.

*This brings
the Tongue
downwards.*

Use.

I. Shews this, Tab. 8. Fig. 3. D. Shews the same, Fig. 2. ejusd. Tab.

Genioglossus.

Genioglossus.

*This moves it
forward.*

up.

THis is one of the second pair so called by *Spigelius* : it ariseth with a narrow Origination, about the middle of the lower Mandible or Chin, and then enlarging himself, is inserted into the Root of the Tongue ; *Veslingius* doth number this amongst the number of *Os Hyoides*, and saith that they are implanted at the Basis of the Bone, which it draws streight upwards, whereby the Tongue is the more easily thrust forward out of the Mouth, though in the excessive heat of Fevers, the Fibres of this Muscle are so parcht that the Patient does it with difficulty.

E. Shews this, Tab. 8. Fig. 3.

Hypsiloglossus

Hypsioglossus seu Basioglossus.

THis is one of the third pair, it ariseth Fleshy from the Basis of *Os Hyoides*, and is inserted into the middle of the Tongue, according to its longitude, and by drawing it inwards, doth bring it backwards. *This moves it backwards.*

This being contracted, it brings the Tongue inwards, and backwards. *Use.*

G. Shews this, Fig. 3. Tab. 8.

O

Stryloglossus.

Styloglossus.

*This brings
the Tongue
upwards and
inwards.*

THis ariseth Fleshy and small, with a sharp beginning from the *Styloidal* process, and growing more broad and Fleshy, is inserted into the lateral part of the Tongue, and it brings it upwards and inwards : it is best found, by discovering of *Styloides* with your Finger, and then your Eye will direct you to it, at the lateral part of the Tongue ; in man it is slender, but in Beasts it is double, Fleshy, and thick.

use.

Its use is thus explained ; If either of these Muscles moves, the Tongue is carried either to the right or left side directly, but both moving, its brought back to the *Fauces*.

K. Shews this, *Tab. 8. Fig. 3.*

Lingualis.

Lingualis.

THis ariseth Flethy and large from the Basis of the Os *Hyoides*, and so runs according to its longitude, forward to the tip of the Tongue, and is much disputable whether it be a Muscle or not; it's endowed both with oblique, transverse, and right Fibres, all which are so fully sprinkled about the Tongue, that is through its whole Body, that they are scarce divisible, and cannot by the best and most industrious hand be separated.

*This moves
the Tongue
both in Con-
striction and
Dilatation.*

Spigelius doth give these Uses to these pair of Muscles, if they may properly be called so, that the transverse Fibres which are implanted in them do serve to contract the Body of the Tongue and so to thicken it, the oblique dilating it, and separating them from one another, and that the right were framed for bringing it to the Palate and *Fauces* in Constriction.

Use.

This Muscle is not to be explained, being disputable whether it be a Muscle or not amongst Anatomists.

Cricothyreoides

Cricothyreoides Anticus.

*This moves
the Carti-
lage oblique-
ly down-
wards.*

THis is said to be the first proper pair of the *Larynx*, as is held by *Veslingius* and most Anatomists : it takes its Origination from the fore-part of the Annulary Cartilage, and ends in the sides of the Scutiformal, and hence it gets the name of *Cricothyreoides Anticus*, and is generally reputed to move the Cartilage somewhat obliquely downwards ; it ariseth in the lower and fore-part of the *Larynx*, having a Flethy beginning ; when this is contracted, it extends the Cartilage *Cricois* or *Annularis*, and so openeth its Cleft for a more deep and greater Voice or Sound.

Use.

F. Shews this at *Tab. 8. Fig. 2.* *D. D.* Shews the same laid bare, *Tab. ead. Fig. 2.* *C.* Shews the same, *Tab. ead. Fig. 3.*

Æsophægeus

Cricothyreoides

The Expedition of the English Fleet

C. 1. The first part of the expedition was the attack on the Spanish fleet in the Bay of Vigo, on the 23rd of July, 1702. The English fleet, commanded by Sir George Roope, consisted of 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet, commanded by Don Juan de Cortado, consisted of 12 ships of the line, 4 frigates, and 10 transports. The English fleet was victorious, and captured 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet was destroyed, and the remaining ships were captured or sunk.

C. 2. The second part of the expedition was the attack on the Spanish fleet in the Bay of Cádiz, on the 1st of August, 1702. The English fleet, commanded by Sir George Roope, consisted of 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet, commanded by Don Juan de Cortado, consisted of 12 ships of the line, 4 frigates, and 10 transports. The English fleet was victorious, and captured 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet was destroyed, and the remaining ships were captured or sunk.

C. 3. The third part of the expedition was the attack on the Spanish fleet in the Bay of Lisbon, on the 1st of September, 1702. The English fleet, commanded by Sir George Roope, consisted of 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet, commanded by Don Juan de Cortado, consisted of 12 ships of the line, 4 frigates, and 10 transports. The English fleet was victorious, and captured 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet was destroyed, and the remaining ships were captured or sunk.

C. 4. The fourth part of the expedition was the attack on the Spanish fleet in the Bay of Cadiz, on the 1st of October, 1702. The English fleet, commanded by Sir George Roope, consisted of 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet, commanded by Don Juan de Cortado, consisted of 12 ships of the line, 4 frigates, and 10 transports. The English fleet was victorious, and captured 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet was destroyed, and the remaining ships were captured or sunk.

C. 5. The fifth part of the expedition was the attack on the Spanish fleet in the Bay of Cadiz, on the 1st of November, 1702. The English fleet, commanded by Sir George Roope, consisted of 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet, commanded by Don Juan de Cortado, consisted of 12 ships of the line, 4 frigates, and 10 transports. The English fleet was victorious, and captured 11 ships of the line, 4 frigates, and 10 transports. The Spanish fleet was destroyed, and the remaining ships were captured or sunk.

The Explanation of the Eighth Table.

- C** C. Sternohyoides at Fig. 2. G. G. Shews the same laid bare at Fig. 3. ejusd. Tab.
- L. L. Sternothyroides Fig. 2. at N N. Shews the same laid bare Fig. 3.
- M. M. Hyothyroides Fig. 2. at m. m. Shews the same bare at Fig. 3. ejusd. Tab.
- E. E. Styloceratothyoides at Fig. 2. F. F. Shewing the same laid bare at Fig. 3. ejusd. Tab.
- D. D. Genethyoides at Fig. 2. E. E. Shews the same laid bare at Fig. 3. ejusd. Tab.
- C. Miloglossus shews this at Fig. 2.
- E. Geneoglossus at Fig. 2.
- I. Ceratoglossus at Fig. 1. D. Shews this also at Fig. 2.
- G. Hypsiloglossus at Fig. 2.
- K. Styloglossus at Fig. 2.
- F. Crycoarytenoides Anticus at Fig. 1. D. D. Shews the same laid bare
-

Fig. II.

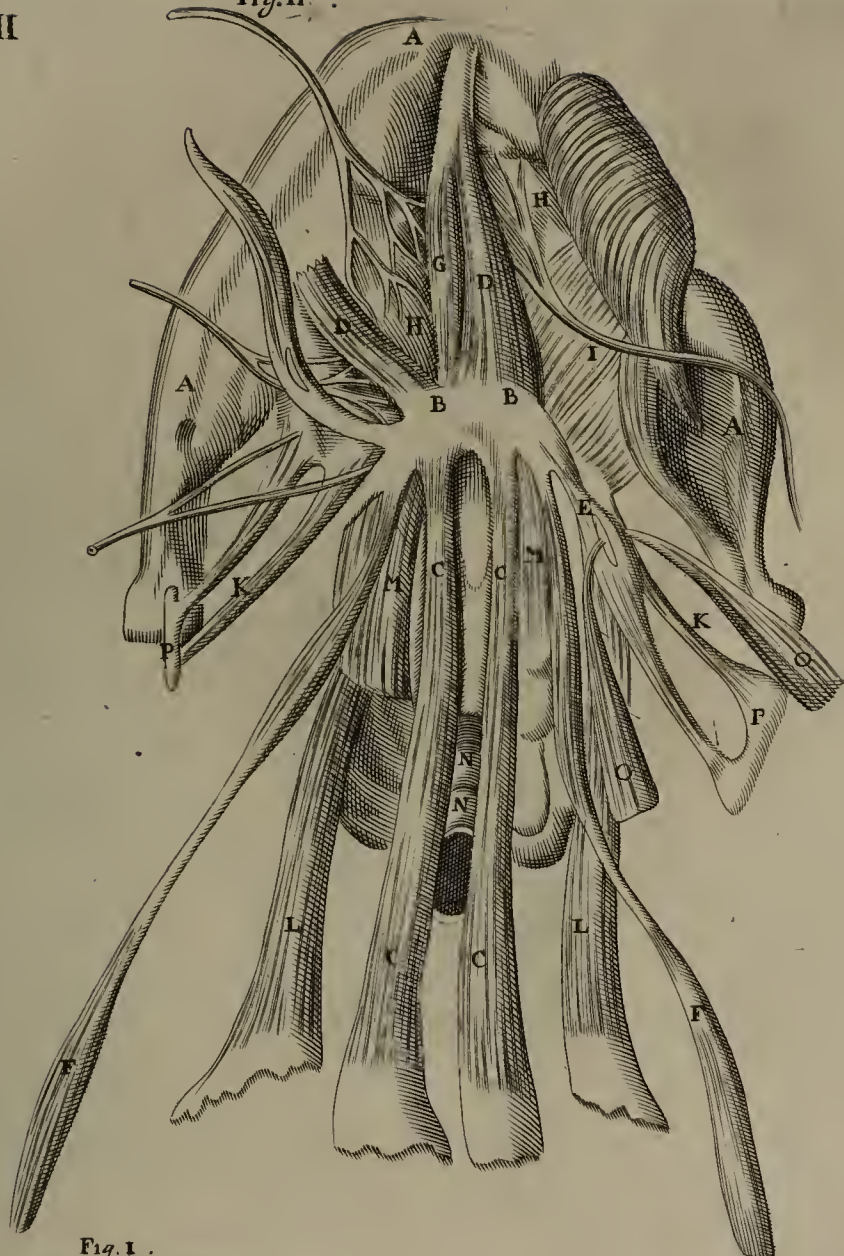
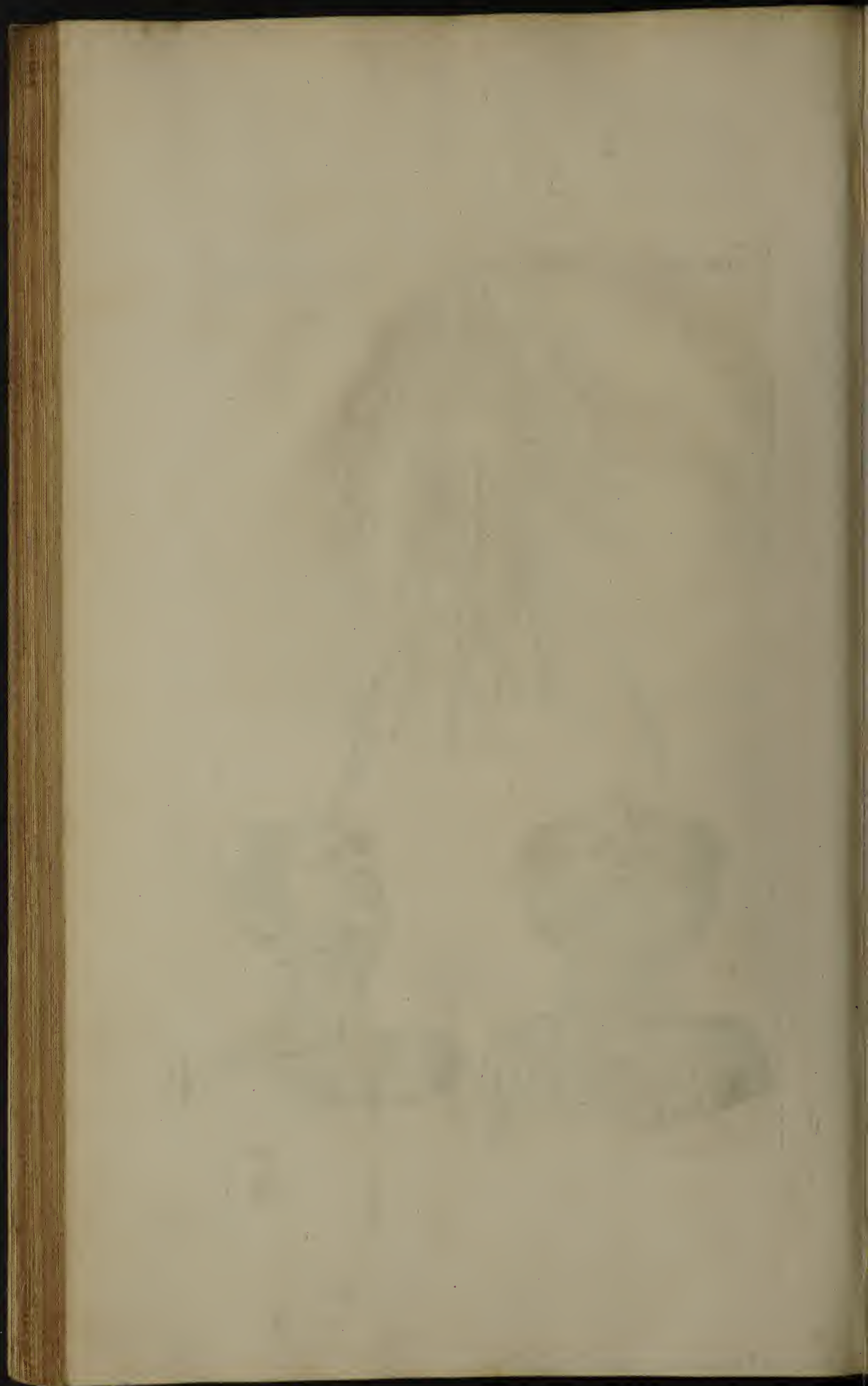


Fig. I.



Fig. III.





Æsophageus seu Sphincter gulæ.

THe *Æsophagus* is a round Channel, by and through which our Nourishment, as both Meat and Drink doth pass from the Mouth into the Stomach, and this Action of Deglutition is performed by the Fibres of the *Æsophagus*, and its Muscles ; for whereas we Eat and Drink at our wills and when our pleasure is this Action is performed when thus made use of, by such Instruments as do serve for a voluntary Motion, as Muscles, which are to be numbred with their Animal Actions : and although it may serve for a Natural use, (as for Nutrition) yet it is no less Animal than Breathing, the which also is customary to Nutrition, yet is it Animal ; Now this *Sphincter Gulæ* is very officious in this service, for when a due Mastication is made, this by its Constriction doth drive it downwards. *This con-
tracts the
Fauces.*

It ariseth Flethy, and is a broad Muscle wholly encompassing both the fore and back part of the *Æsophagus*, arising laterally according to the length of the Scutiform Cartilage, encompassing the *Æsophagus* like a *Sphincter* ; This Muscle being carefully raised, you will much better find *Stylopharyngæus* & *Cephalopharyngæus*. *Its Use.*

D. D. Shews this, *Tab. 9. Fig. 5.*

P

Stylopha

Stylopharyngæus.

*This dilates
and opens the
Æsophagus.*

use.

THis third pair is so called, and do arise with a small beginning from the inner part of the *Styloidal* process, and descending with its thin body, is implanted by a Membranous Tendon into the *Thyroid*, the sides of the *Os Hyoides*, and the Root of the Tongue; this helpeth forwards the former in its Contraction.

Whereas there are appointed two as Dilators of the *Æsophagus*, so this is accounted as one of the Constrictors, though *Veslingius* thinks it rather Dilates.

C. C. Shews this, *Tab. 9. Fig. 5.*

Cephalopha-

Cephalopharyngæus.

THis ariseth from the *Cranium*, and the first Vertebre of the Neck where they are joyned, and so descending, is implanted into the lateral sides of the *Os Hyoides*, *Cartilago Scutiformis*, and the beginning of the *Æsophagus*, for whom he seems to make a Coat, and by lifting this up doth constrict the *Fauces* in the Deglutition. This doth contract the Fauces. use.

A. A. Shews this, *Tab. 9. Fig. 5.*

Cricothy-

Cricoarytænoides Posticus.

*This extends
the Larynx.*

Use.

BY *Spigelius* this is reckoned as one of the first pair of the *Larynx*, extending or opening its Cleft, and by *Cassorius* it is called *Par Cucullare*, it ariseth Flethy from the hinder and lower part of the *Cricoides*, and running up with right Fibres, and repleating the Cavity of the *Cricoides*, is Nervously implanted into the inner feat of the *Arytænoides*, and by division of the two *Arytænoidal* Cartilages, the *Larynx* is opened. This doth extend the *Arytænois*, and by converting it backwards to the outward parts, it opens the Epiglot.

D. D. Shews this at *Tab. 9. Fig. 1.* *G. G.* Shews the same laid bare, *Tab. ejusd. Fig. 2.* *C. C.* Shews the same, *Fig. 4. ejusd. Tab.*

Cricoarytæ-

Cricoarytænoides Lateralis.

THis is generally allowed one of the third pair, extending the *Larynx* to the side; or opening its second *Rima* This extends it obliquely lateral. or Cleft, it ariseth from the lower part of the Annular Cartilage upwards, and is inserted into the lateral external part of the *Arytenoides*, opening the *Larynx* by the oblique use. deduction of its Cartilages.

Here's also observable, That by how much the second pair of the Contractors doth draw to a mutual Contract, the second pair of the Extenders do bring them outwards, and so open them. This is generally allowed to extend the *Larynx* laterally, and so doth open the *Rimula*.

E E. Shews these laid bare, *Tab. 9. Fig. 2* *C.* Shews the same *in situ*, *Tab. ead. Fig. 3.* *C. C.* Shews them *in situ*, *Tab. ead. Fig. 5.*

Arytænoides.

Arytænoides.

*This con-
tracts it ob-
liquely la-
teral.*

THis is also called *Claudens Secundum*, its very small and Flethy, and ariseth with oblique Fibres from the *Arytænois*, where it is joyned to the *Cricois*, and is again inserted into it, where it connecteth its self with its Companion ;
Use. This moveth the *Arytænois* obliquely, and to either side, and so by constringing its Basis, doth shut the *Glottis*

This is c lled *Arytænoides* or *Guttalis*, and whereas there are allowed two motions of the *Larynx*, by which it is either contracted or dilated, shut or opened, so doth both these Dilatations and Constrictions, or Clausion and Apertion proceed from their proper Muscles. Thus when the *Thyrois* is dilated, the *Arytænoides* is shut ; and thus according to *Galens* opinion, the *Larynx* is contracted when the sides of the *Thyrois* or *Scutiformis* are contracted and moved inward, dilated when they are extended and brought outwards, and shut when the *Arytænois* is constringed and brought into a cavity, opened when it is brought outwards and extended.

The action of these Muscles are most remarkable, when we forcibly stop our Breath for some time, for then it prevails against the contrary endeavour of the Muscles of the *Thorax*, which serve to Respiration, and shuts the *Arytænoides* so close, that no Air can enter in.

F. F. Shews the same laid bare, *Fig. 2. ejusd. Tab.* *B. B* Shews them at *Fig. 4. ejusd. Tab.*

Thyreosary

Thyrecoarytenoides.

THis is one of the fourth pair, arising Fleſhy, broad, and is tranſverſely implanted in the Cavity of the *Larynx*, This con-tracts it directly. and from the middle inner part of the *Thyroidis*, and being carried upwards according to its length, is inſerted into the lateral part of the *Arytænoidis*, which makes the *Glottis*, the which conſtringing doth ſhut the *Larynx*; This Muſcle is beſt found by dividing *Cartilago Thyroidis*, from the *Cricoidis*, *Arytænoidis*, and ſubjacent Muſcles, the Coats of them being carefully preſerved, after which will plainly appear this.

This pair if they be inflamed, in a Squinancy, when as they do exactly ſhut the *Rima* or Cleft, it brings Death along with it. obſ.

D. Shews this, *Fig. 3. Tab. 9.* B. B. Shews the ſame at *Fig. 6. ejusd. Tab.*

R. Sphenophag.

Sphenopharyngæus Primus.

*This doth
dilate the
Fauces.*

THe Muscles of the *Fauces*, by some the *Pharynx* or beginning of the *Æsophagus*, are those which do serve for Deglutition, and therefore Nature hath planted at the top of the *Æsophagus* Muscles here as Instruments of voluntary motion for acting to our wills or pleasures; and as some of these do serve for Constriction, so also are others as useful for Dilatation, amongst which are these reckoned as the first pair.

This ariseth thin and Nervous nigh the sharp Appendix of the *Os Cuneiforme*, descending by the inward Cavity of the *Pterygoides*, and is inserted by a small Tendon into that Skinny part of the *Pallate*, from which the *Gargareon* seems to proceed, and doth dilate these parts for Reception of their Nutriment.

Neither this nor its fellow are rais'd well or distinctly without much trouble and difficulty.

B. B. Shews this at *Tab. 9. Fig. 4.*

Sphenopha

Sphenopha

Fig. 1.

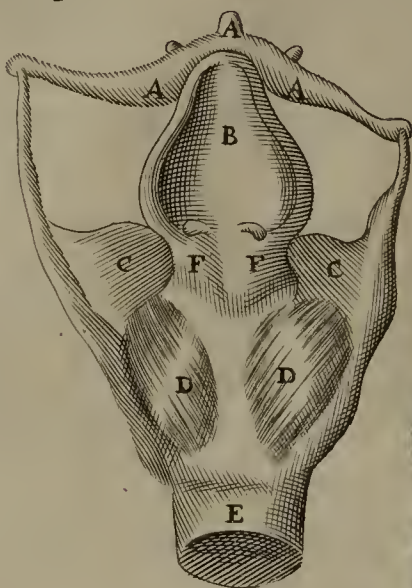


Fig. 2.

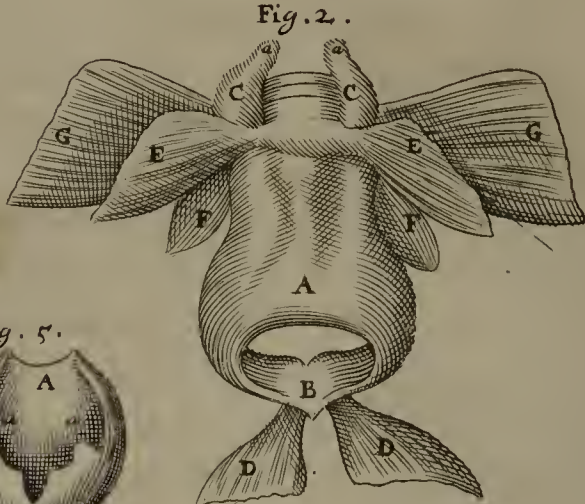


Fig. 5.

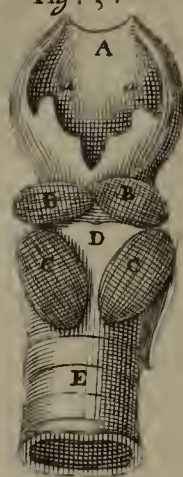


Fig. 3.

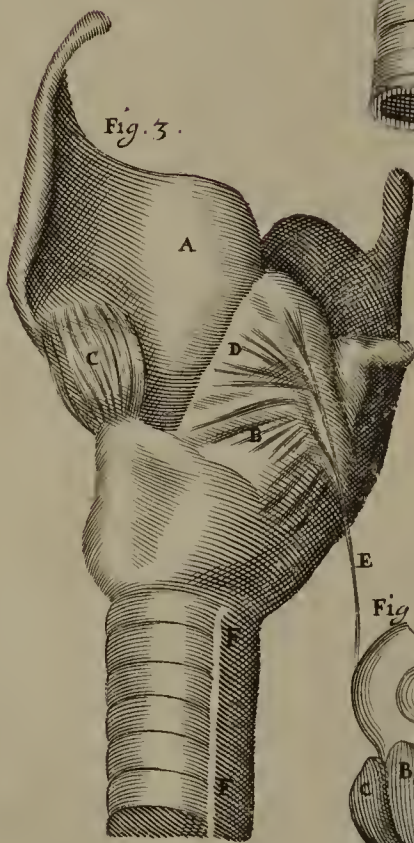


Fig. 4.

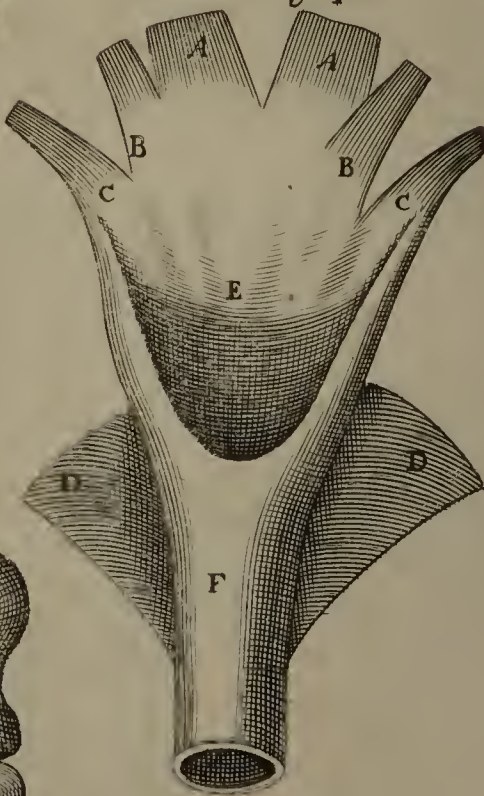
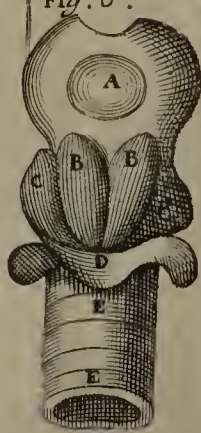


Fig. 6.



The Explanation of the Ninth Table.

- D** D. *Æsophagæus at Fig. 4.*
C. C. *Stylopharyngæus at Fig. 4.*
A. A. *Cephalopharyngæi at Fig. 4.*
B. B. *Sphenopharyngæi at Fig. 4.*
D. D. *Cricoarytenoideus Posticus at Fig. 1. G. G. Shews the same
laid bare at Fig. 2. D. D. Shews the same at Fig. 5.*
E. E. *Cricoarytenoideus Lateralis at Fig. 2. C. C. Shews the same
laid bare at Fig. 3. C. C. Shews the same also at Fig. 6.*
F. F. *Aritenoides shews this laid bare at Fig. 2.*
D. *Thyroaritenoides at Fig. 3. B. B. Shews the same at Fig. 6.*
-

Spheno

Spencer

Sphenopharyngæus Secundus.

THis second is by some allowed to arise from the same Origination as the former, and is inserted into the lateral and back part of the *Fauces* and *Æsophagus*, the which drawing downwards; they do dilate the Cavity of the *Fauces* and *Gula*; To find these after you have raised the *Larynx* and *Æsophagus*, leave the *Fauces* entire, then divide the *Fauces* themselves from *Os Palati*, till you come into the Cavity, then carry your Knife close internally to the *Os Cuneiforme*, and being thus divided, you will with ease find both their Originations, and with as much pleasure you may dissect them.

This also is shewn at *Tab. 10. Fig. 1. at B. B.*

Next to these should I have put in the *Stomach* and *Intestines*, but *Dr. Willis* hath given so full an Account of them, and shewn their *Fibres* so exactly, that whoever desires to take a view of them may be very well satisfied thereof in his Book named *Pharmaceutice Rationalis*.

Pterygoides

Pterygoides Externus five Abducens.

*This brings
the Mandible
forwards.*

THe lower Mandible hath allowed it variety of Motions, and these are both very necessary to Human life, as also for well ordering of their Designs: for how can the Meat be either received into the Mouth, or there chewed or lessened, unless the Mouth were opened, and then shut again; the Teeth do act their parts, and by a mutual Collision and Commintion towards a fair Deglutition, do make a happy progress towards the health of Man; without the benefit of Muscles, the Grinders must lie still, and the Incisors grow dull; the Mandible hath its variety of Muscles granted it for the discharge of its variety of Offices, amongst which this is accounted as one of its fourth pair, and doth arise from the External part of the *Processus Aliformis* in part, as also from the rough and sharp Line of the *Os Sphenoidis*, strong, Nervous, and Flethy, and so marching down large, is inserted by a strong broad Tendon into the inner part of the lower Mandible, laterally, just under the Tendon of the Temporal Muscle, and doth move the Mandible forwards, and as it were doth abduce it from the Head.

use.

E. E. Shews this at *Tab. 10. Fig. 1.*

Pterygoides

Pterygoides Internus seu Adducens.

THis ariseth thick and short from the inner Cavity of the *Processus aliformis*, being first Nervous, then Flethy, and is inserted by a broad, long, and Nervous Tendon into the lower Mandible internally lateral, the which drawing it upwards, doth help the Office and Action of *Temporalis*, bringing the Mandible inwards and backwards. These two Muscles do not appear until the whole dissection of the Tongue, *Larynx*, and *Gula* be fully compleated. This brings it backwards.

D. D. Shews this at *Tab. 10. Fig. 1.* v.

S

Longus.

Longus.

*This con-
tracts the
Neck.*

THE Neck is as an Appendix to the middle Venter, or a middle between the Head and Trunck. Such Animals are destitute hereof, which do not move their Heads with the Trunck of their Bodies, as Fishes, Frogs, &c. This Neck hath a four fold motion granted it, as forwards, backwards, and to either side, and every of these Motions are performed by the benefit of Muscles, of which some are called Flectors, others Extensors; of the Flectors, the first pair are called *Longi*, lying under the *Æsophagus*.

This Muscle ariseth sharp and Flethy from the forepart of the Body, from the fifth and sixth Vertebre of the *Thorax*, where the Rib joyns its self to him, and so running up under the *Æsophagus*, is joyned to the sides of the Bodies of all the Vertebres, ascending until he comes to the first of them, where meetin^g with *Scalenus*, they insert themselves by a sharp Nervous Tendon into the transverse process of the first Vertebre of the Neck.

use.

The Neck by the benefit of these with the Head, is bent or contracted forwards, one only operating, it carrieth it to the sides

A. A. Shews this, *Tab. 10. Fig. 2.*

Longus

2

Scalenus

The Explanation of the Tenth Table.

F I G. I.

- A** A. Temporalis laid bare.
B. B. Masseter.
C. C. Digastricus or Biventer.
D. D. Pterygoideus Internus.
E. E. Pterygoideus Externus.
F. Quadratus Riolani.

F I G. II.

- r. f. t. v.** Os Ptery. oides.
O. O. Musculus Pterygopalatinus which depresseth the Uvula;
 and with it the Glandule of the Palate.
X. X. Shews its Tendon which is reflected about the neck of the
 Os Pterygoides as on a Trochlea, and is inserted into the Glandule
 of the Palate.
r. Shews the neck of the Os Pterygoides with its small head.
B. Shews the Glandula Palati.
d. The Uvula.
a. a. Part of the Muscle Pterygoideus Internus to which is adjacent
 Pterygopalatinus mentioned at O. O.
C. Shews its Origination arising from the lower part of the Cavity
 of the Os Pterygoides.
q. Shews another Muscle called Sphenopalatinus which attols the
 Glandula Palati, and with that the Uvula.
f. f. Shews its Tendon implanted in the side of the Glandula Palati.
Z. Shews its Origination out of the Os Sphenoides.
g g The Interior Cavities of the Nostrils

Moreover as touching these two Muscles (besides what hath
 already been said as to their Uses) this Observation is very mate-
 rial as to their Usefulness, (viz) in Hauking or forcibly raising
 up any tough Flegm or Lapidouse Matter lodged about the Æsophagus,
 these are of very great use as to the dispatch of the same forward,
 and sending it outwards, being here planted as two strong Ligaments
 which can give force to the Pallates raising it self for the discharge of
 the same

F I G. III.

- A** Musculi Longi.
B. Scalenus.
C. Mastoideus.

Scalenus

Fig. 2.

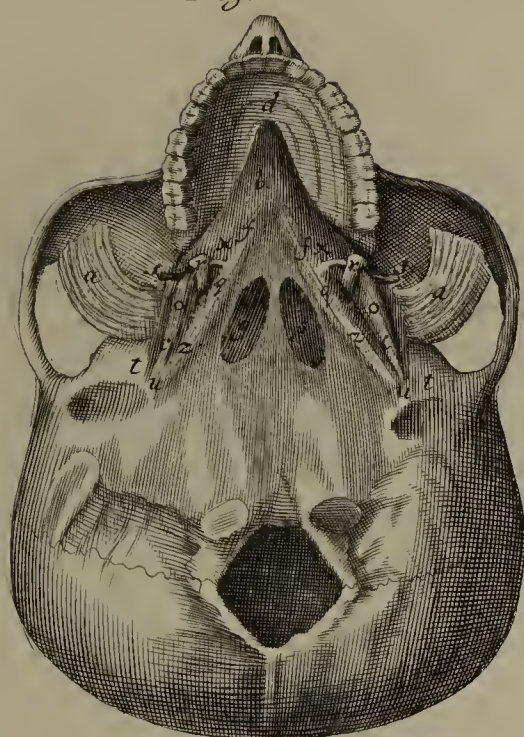


Fig. 1.

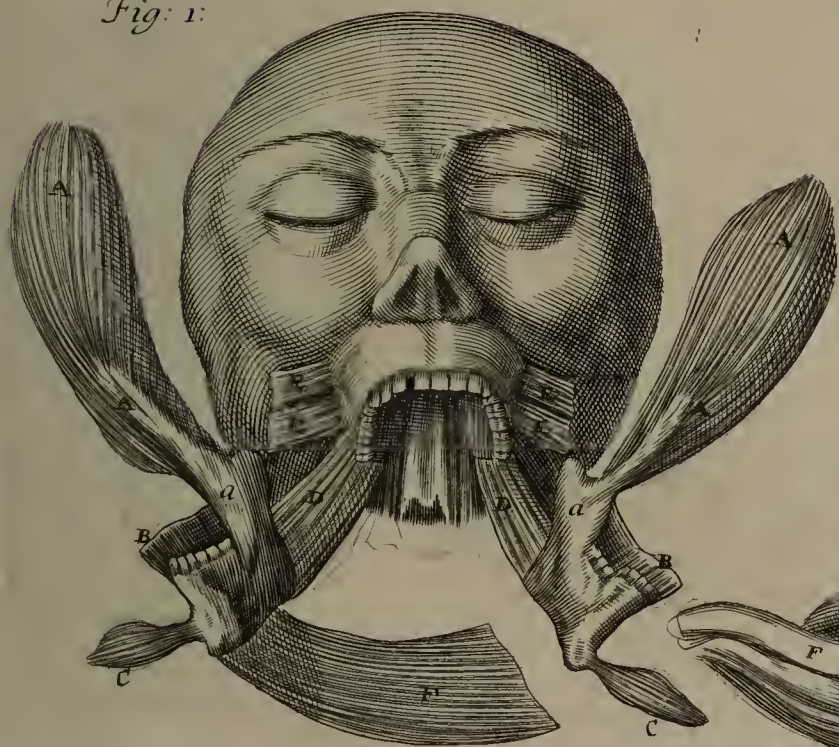
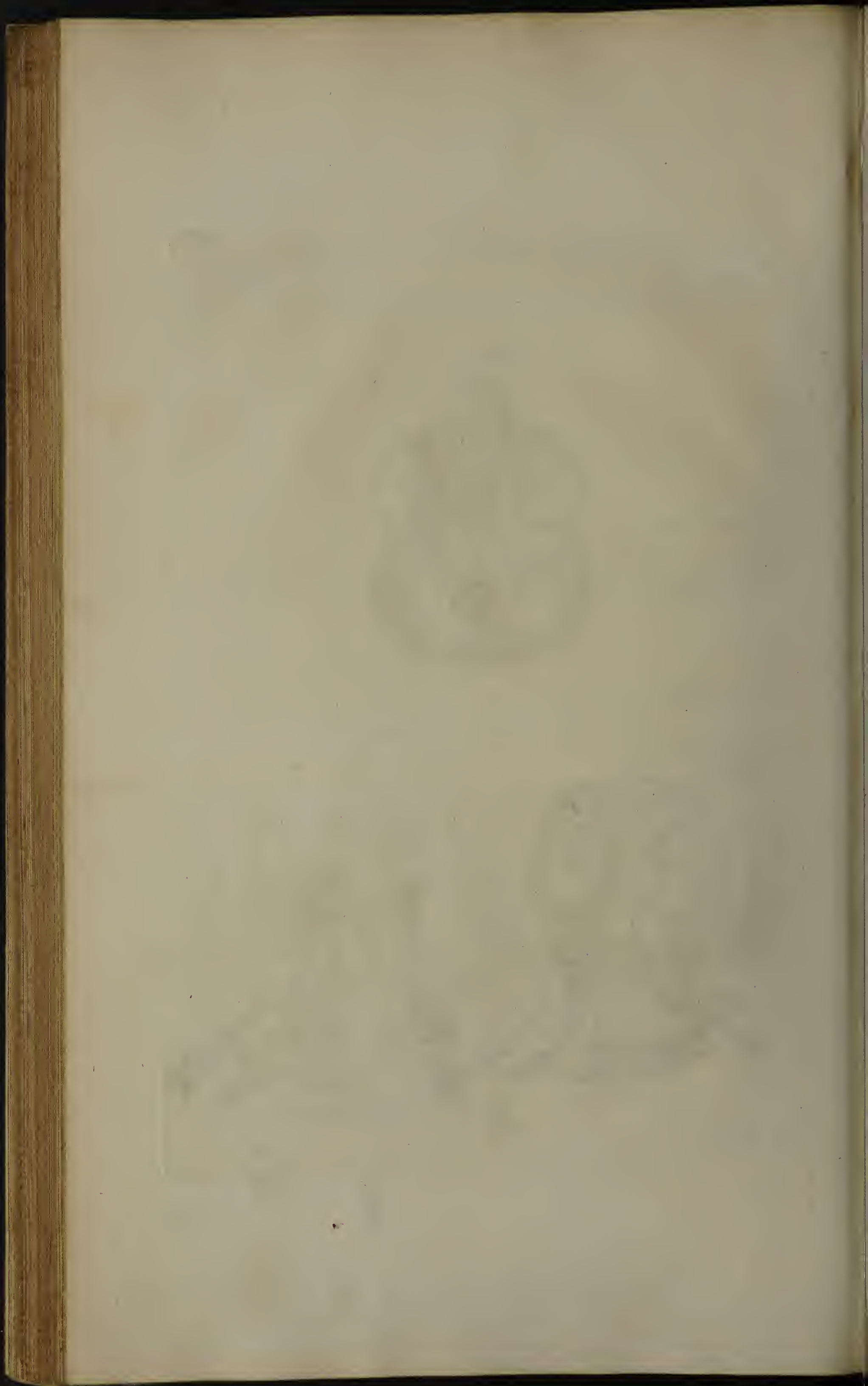


Fig. 3.





Scalenus five Triangularis.

THese pair of Muscles resembling a Triangular Figure, by some Anatomists are not improperly called *Triangularis*. This contracts the Neck as the former.

This ariseth from the first and uppermost Rib of the *Thorax*, broad and Flethy, and then narrowing himself, in his upper course he bestows transverse Fibres upon all the transverse processes of the Neck, and is inserted as the former, and doth also help the former forward in their motion ; This Muscle hath a peculiar Cavity allowed it, through which the Arteries descending to the Arm, and the Veins ascending from thence do pass.

If these Muscles do work together, they do contract and bring the Neck and also the Head right forwards, but if only one do operate, it inclines the Neck to one side forwards. Use.

B. Shews this at *Tab. 10. Fig. 2.*

Pectoralis.

Pectoralis.

*This moves
the Arm for-
wards.*

THe upper part of the Arm reaching from the top to the *Cubite*, is that which we generally do call the Arm, and this is moved by several Muscles, the first of which is called either *Adducens Humerum*, or *Pectoralis*, by some the Boxing Muscle, it possesseth the forepart of the *Thorax*, and ariseth first from the middle of the *Clavicle*, where he is most round, and next the Breast Flethy, then from the *Sternon* according to his length, and is annexed to his Cartilages; Thirdly, from the Cartilages of the sixth, seventh, and eighth Ribs, and is there Nervous in his Origination, and so proceeds Flethy and large until he arrives at the lateral part of the *Thorax*, where he is converted into a short, broad, and strong Tendon, and is inserted into *Os Humeri*, and according to his length between *Deltois* and *Biceps*.

Use.

This bringeth the Arm to the Breast forwards, and hence by some hath it given it the name of the Boxing Muscle, and this either directly, or somewhat upwards, or downwards, according to the contraction of its upper, middle, or lower Fibres.

B. Shews this in *Tab. 16. c. b. d.* Shew its diverse Fibres.

Subclavius.

Subclavius.

THis is called the *Subclavius* which is seated under the *Clavicle*, and lodgeth between the first Rib of the *Thorax*; This is accounted the first Muscle of the *Thorax*, it ariseth from the Inferior part of the *Clavicle*, and being enlarged forwards with Oblique and Transverse Fibres, it is implanted into the first Rib near the *Sternon*, and by drawing it upwards and outwards, doth dilate the *Thorax*.

*This brings
the Clavicle
upwards and
outwards,
and doth o-
pen the Tho-
rax.*

The use of this Muscle is for drawing down the *Clavicle*, *Use and of.* when it is moved upwards with the *Scapula*, for when the *Scapula's* are attolled, the *Clavicles* are lifted up with them, the which to reduce into their proper places, the *Subclavius* is to be brought downwards; and hence in Fractures of the *Clavicles*, if they be fractured near the *Sternon*, the Arm with the *Scapula* does soon fall downwards, and that part which is next the *Sternon* doth ascend and is raised upwards, as *Hippocrates* doth observe, *Lib. de Fractur.* and on the contrary, if they be broken near the *Acromium*, you will find neither part to ascend: the cause of which, the same worthy Author doth fortifie with this ingenious Reason; Whereas this Muscle is inserted to that part which is next the *Acromium*, when the *Clavicle* is fractured two ways, this *Subclavian* Muscle is presently contracted; and thus the Arm draws the dependent *Scapula* together with its self, whilst the other part is detained in its place by the strength of the Muscle.

F. Shews this, *Tab. II.*

T Serratus

Serratus Major Anticus.

*This brings
the Scapula
forwards.*

THese Muscles of the *Scapula* have not their Names given them from their Use, but rather from their Figures, as this pair much resembling the Teeth of a Saw, and hence called *Serrati*. This is the second Muscle placed in the side of the *Thorax*, arising from the third, fourth fifth, sixth, seventh, eighth, ninth, and tenth Ribs, with a Saw-like, Nervous, and sharp Origination, hence growing Flethy upon the Ribs, he ascends and inserts himself Flethy into the whole Basis of the *Scapula* inwards; It is much Disputable both by *Spigelius* and *Veslingius*, whether the Origination and Insertion be not *é contra*; the motion of this Muscle is promoted by the Oblique Descendent Muscle of the *Abdomen*: when this is contracted to its beginning, it draws the *Scapula* forwards, as also the *Serratus Minor*, but somewhat downwards.

use.

And also as I apprehend, another Use may be to tie or fasten the *Scapula* to the Breast.

A. Shews this at *Tab. 16. a. a. a.* Shews its Origination and its Tendon, *D. D.* Shews the same at *Tab. 11. F. F. F. F.* Shews the same in its place in *Tab. 1.*

Serratus

T

Serratus

Serratus Minor Anticus.

THis is the fourth, which wholly lies under the *Pectoral* ^{this brings} Muscle in the fore part of the *Thorax*, and is called ^{it upwards.} *Serratus* from its being like a Saw, acuminated with various Flethy Fibres; *Minor*, as touching its difference with the *Major*, it is substrated to the *Pectoral* Muscle, arising from the four first upper Ribs (but one) by so many serrated Originations, and so descending towards the *Scapula* narrows himself, and is inserted broad, Flethy, and Nervous into the *Processus rostriformis* of it, and draweth it forward to the *Thorax*: if they work both together, they do bring the *Scapula* to the Breast: if the upper they bring it upwards, and *é contra*: if the lower, they bring it downwards. use.

This Muscle hath also (as I conceive) the same Use with the former, binding the *Scapula* forward to the Trunck of the Body.

F. Shews this laid bare, *Tab. 11.*

Intercostales

Intercostales Externi.

*These do di-
late the Tho-
rax.*

THese have their Originations from the Transverse processes of the Back, where the Ribs are joyned, and so proceeding Fleshy, do fix themselves all along from the lowermost part of the upper Rib, external to the upper part of the lower Rib, and so doth proceed to the Cartilage of the *Sternon*: The outward Muscles being contracted, do draw the Ribs towards their Originations upwards and outwards, in Respiration; hence the *Thorax* is dilated, and so its Cavity is made wider.

obs.

All these Muscles are endowed with Oblique Fibres, and these intersecting each other, do shew their differences from the *Interni*. As a good Observation to the young Chirurgion, let him take care in opening of any Abscesses or Empyemas which may happen here, for if he makes a direct Incision here downwards, he cuts and divides all the *Spermatick* Fibres, and therefore in these cases he is advised to make his Incision in an oblique manner.

K. K. K. K. Shews this at *Tab. 11.* *O. O. O.* Shews the same, *Tab. 5.*

Interco



The Explanation of the Eleventh Table.

F Subclavius.
D. D. Serratus Major Anticus.
E. Serratus Minor Anticus *shewing it laid bare.*
K. K. K. K. Intercostales Externi, Intercostales Interni.
C. C. Subscapularis.

Interco

1840

The City of New York

For the purpose of
the City of New York
the City of New York
the City of New York

and

Intercostales Interni.

THese have their Originations where the Ribs do begin to bend inwards, and run from the lower to the upper part of the Ribs, not only to the Cartilage, but under that to the *Sternum*; these Muscles do work contrary to the former, for these do bring the *Thorax* downwards and inwards in Expiration, whence it becomes Constrict, and the Cavity is made less. *These do move the Thorax and constrict it.*

Moreover, whereas the External Muscles do end about the beginning of the Cartilages, so as that there are left Intercartilaginous spaces: hence is it, that Nature, that provident Mistress, who abhors all vacancies, hath filled all these empty spaces with these Internal Muscles, and hath raised the same to the Exterior Superficies of its space or those spaces. *Use.*

These you may also see with the former.

V

Pectoralis

Pectoralis Internus seu Triangularis.

*This doth
constringe
the Thorax.*

use.

THIS by some is accounted the sixth Muscle of the *Thorax*; it is a small and thin Muscle arising from the inner part of the *Sternum*, and adheres to the Cartilage of the upper Ribs, sending forth on either side four small Projections to the Osseal Extremities, by which the third, fourth, fifth, and sixth true Ribs are joyned to the Cartilages, by the adduction of which, they do constringe the *Thorax*, and do somewhat depress it forward.

This Muscle is not to be shewn by any Figure.

Cremasteres

Pectoralis

V

Cremasteres five Suspensorii.

THere are three proper Coats allowed the Testicles, 1st. *Erythroides* or *Tunica rubra*, and 2^{dly}. *Elytrois*, or *Vaginalis*, and 3^{dly}. *Tunica Albuginea*, or *Nervea*: to the External Membrane of the first are adnated the Cremaster Muscles, one on either side, the which in Men have their Originations from that Ligament which is in the *Os Pubis*; in Dogs and other Animals they are seen to take their Originations from the Tendons of the Transverse Muscles, and their Flethy Fibres do run through the whole length of the Vaginal Coat, especially in its back part; for which cause the outward Superfices of this Coat is seen to be Asperate and Fibrous, the inward smooth, and covered with a certain waterish Humidity, and is strongly annexed to the lower part of the Testicles.

Regnerus de Graaf doth allow a three fold Use of this Muscle; as first that it keeps the Testicles from Cold; Then that it keeps them up from falling down, the which by their weight, should it once so happen, they would hinder the *Spermatick* Vessels in their Operations; And lastly, as various Authors have writ and observed, That they attract them for a better Excretion of the Seed, as is seen in the Act of Venery. *Bartholinus* doth witness, That there are such who have this so strong, that they can according to their will retract the Testicles, and then again dismiss them.

Tab. 13. Fig. 4. at C. C. you have this, D. D. Shews their Flethy Fibres.

Accipit

Erector

Erector Penis, five Collateralis.

T is is said
to erect the
Penis.

THe Seed made, prepared, and elaborated in the *Spermatick* Vessels do require a proper Instrument for its discharge into that part which Nature at first designed it for, by which means we see the like produced by the help of this Instrument. *Plato in Timæo* did suppose the *Penis* to be some certain Animal, which could produce such strange effects as touching both Generation and Propagation, but although it is no Animal, yet it must properly be allowed an Animal-part and Instrument: Its placed in the lower part of the Belly, for the more commodious executing its Office, it takes its Original from a strong Foundation, as from the Bones of the *Pubis*, to whose Root it is most firmly planted; we pass by its Figure and Substance, and come to its Muscles.

This Muscle has his Original from the Appendix of the *Coxendix*, beneath the beginning of the two Nervous Bodies; in whose Interior part their thickest Fibres do terminate and vanish.

use. *Spigelius* doth assert that they take their names from their qualities, and that they do erect the *Penis*, and in coition do preserve the same; but this is denied by *Regnerus de Graaf*, as you will see in the next Chapter: for these Muscles rather depress the *Penis*, that so the Seed may be the more straightly ejaculated into the *Uterus*.

S. S. Shews this at *Tab. 13. Fig. 1.* *T. T.* Shews the same, *Tab. ead. Fig. 2.* *G. G.* Shews this, *Tab. 12.*

Accelerator

The Exposition of the Twelve Tables

By the Learned
John Selden
Esq.
of the Inner Temple
in the County of Middlesex
Esquire

London

The Explanation of the Twelfth Table.

G G. Erector Penis.
F. F. Accelerator Penis.
K. K. Levatores Ani.
I. Sphincter Ani.

Accele

Accelerator Penis.

BESIDES the former, the Virile Member hath two other Muscles allowed it called *Urethram Trabentes*, arising ^{This said to dilate the Urethra.} Fleshy from the *Sphincter Ani*, and joyning with its partner internally lateral, and marching by the fore part of the *Penis*, is inserted into the *Urethra*, and is generally asserted that it was framed for the dilating of the *Urethra*; but the Use thus designed these Muscles is much rejected by *Re n. de Graaf*, the which he confuteth by these Reasons, That when all Muscles do work in their own proper method, their Venters do tumefie, and their ends do approach nearer each other; the which being granted, it cannot thus happen that the *Penis* should be extended, the Action of the Muscle being Contraction, and this being most contrary to Extention; neither can the *Penis* obtain Erection by the benefit or help of these Muscles, for it rather would appear depressed than erected these being contracted, and they being planted in the lower part, or under the *Penis*, taking their Origination from the Appendix of the *Coxendix*, and so implanted to the lower part of the Yard.

As to the two also which are assigned by other Authors to dilate the *Urethra*, they are in no ways capable to perform this, these Muscles running through the middle of it, are firmly united to each other by one extremity of Fibres, whilst the opposite to the former obliquely running over the *Urethra*, do send the same into the sides of its Nervous Bodies; but as to the Erection of the *Penis* two kinds of Vessels do seem chiefly to serve with the Muscles for the performance of this, as Nerves and Arteries; but of these you may plentifully satisfy your self in *Regner. de Graaf, de Organ. Viror. Fol. 154. &c.*

This you have at *R. R. Tab. 13. Fig. 1. Fig. 2.* at *S. S.* you have the same, *ead. Tab. F. F.* Shews the same, *Tab. 12.*

Musculi Clitoridis.

*This extends
the Clitoris.*

THe *Clitoris* hath variety of names bestowed on it, as *Amoris Dulcedo*, *Oestrum Veneris*, *Libidinis Sedes*, &c. it differs from the *Virile Member* if you consider its whole *Fabrick*; First, because its bifurcated parts are twice longer when joyned, in the *Penis* when the parts are conjoyned they are four times longer than the bifurcated parts, Then because it hath no such like Channel as hath the *Penis*, neither is its *Glans* perforated as is that of the *Penis* in Men; All Anatomists have by consent allowed that there are Muscles annexed to the *Clitoris*, but as touching the number of them there is held a Dispute; we judge and allow of two arising from the Bones of the *Coxendix*, and running above its *Crura*, are implanted in them; This Muscle we call *Graafiani*, and by this the *Clitoris* is raised.

obs.

This Use we think proper to ascribe to the *Clitoris* and its Muscles, by the Contraction of the *Clitoris* and compressing its Thighs, it doth distend the third Body much more with the *Glans*.

use.

There is also another pair of Muscles ascribed to the *Clitoris* by Authors, arising from the *Sphincterani* with a broad beginning, passing by the Lips of the *Pudendum*, between the *Clitoris* and *Plexus Retiformis*, and it is so annexed to the *Clitoris*, that it is judged that it was appointed rather for the contracting of the Vaginal Orifice, than for erecting the *Clitoris*; and from hence we presume to call it *Musculus Labiorum Uteri Contractor*.

C.C. Shews these at *Tab. 13. Fig. 4.* by this Muscle the *Clitoris* is depressed, D.D. Shews its Fleshy Fibres, E.E. The Fleshy Fibres of the *Sphincter* annexed to the Nervous substance of the *Clitoris*.

Levatores

Levatores Ani.

That part we generally call the *Anus* is that which is the ^{this lifts} end of the *Intestinum Rectum*; these arise from the ^{it up.} Ligaments of the *Coxendix*, and *Os Sacrum*, under the Bladder, small, thin, broad, and Membranous, and are inserted into each side of the *Podex*; These Muscles being very much relaxed, do suffer a *Procidentia Ani*, or rather *Prolapsus Intestini*, ^{use.} these are best discovered before you remove the *Intestinum Rectum*, *Vesica*, and adjacent parts.

R. R. Shews these at *Tab. 13. Fig. 2.* K. K. Shews the same, *Tab. 12.*

Sphincter

Sphincter Ani.

*This purses
up the Anus.*

THis from its Use is called *Constrictor Ani*, or *Orbicularis*, it ariseth from the lower Vertebres of the *Os Sacrum*, round, and broad, joyning himself largely circular to the *Intestinum Rectum* with Transverse Fibres much thicker above than below, where he adheres so firmly to the *Cutis*, that it is scarce separable : and hence by some Anatomists it is called *Cuticulosus*.

Use.

We acknowledge the Use and Nobility of either of these, for when they any wise suffer a *Paralysis*, this being hurt, the Excrements involuntarily do come down, and for the service they do in this case, they are called *Constrictores*

Q. Shews this at *Tab. 13. Fig. 2. I.* Shews the same, *Tab 12.*

Sphincter

Sphincter Vesicæ.

THe Urinary Bladder is an Organick Membranous part ^{This purser}
of the lower Belly, the which is formed as a receiver ^{the Bladder.}
to take the Urine into it, or Serum which passeth from
the Kidneys into it, and at due time doth also serve for a dis-
charge of the same, and so this Bladder hath two Muscles given
it, the one is said to retain the Urine in it, the other drives
it out; How unkind would Human life be, if it should be con-
tinually attended with a continual dropping of Urine, as also
how troublesome would it be to Mankind to be perplexed with
as great a stoppage; therefore kind Nature as she hath been so
free as to give the Bladder one pair to keep it in whilst it is con-
venient to discharge it, so also hath she been as provident to let
it out when the Bounds of Nature commands a discharge thereof:
the first from its Office hath gained the name of *Sphincter*.

This is placed orbicularly in the neck of the Bladder, scarcely
distinct from the substance of it, only where you find a round
Induration, this is the same, this doth keep the Urine from in-
voluntary falling out from the Bladder, pursing it up.

O. O. Shews this at *Tab. 13. Fig. 1.*

Y

Detrusor

Detrusor Urinæ.

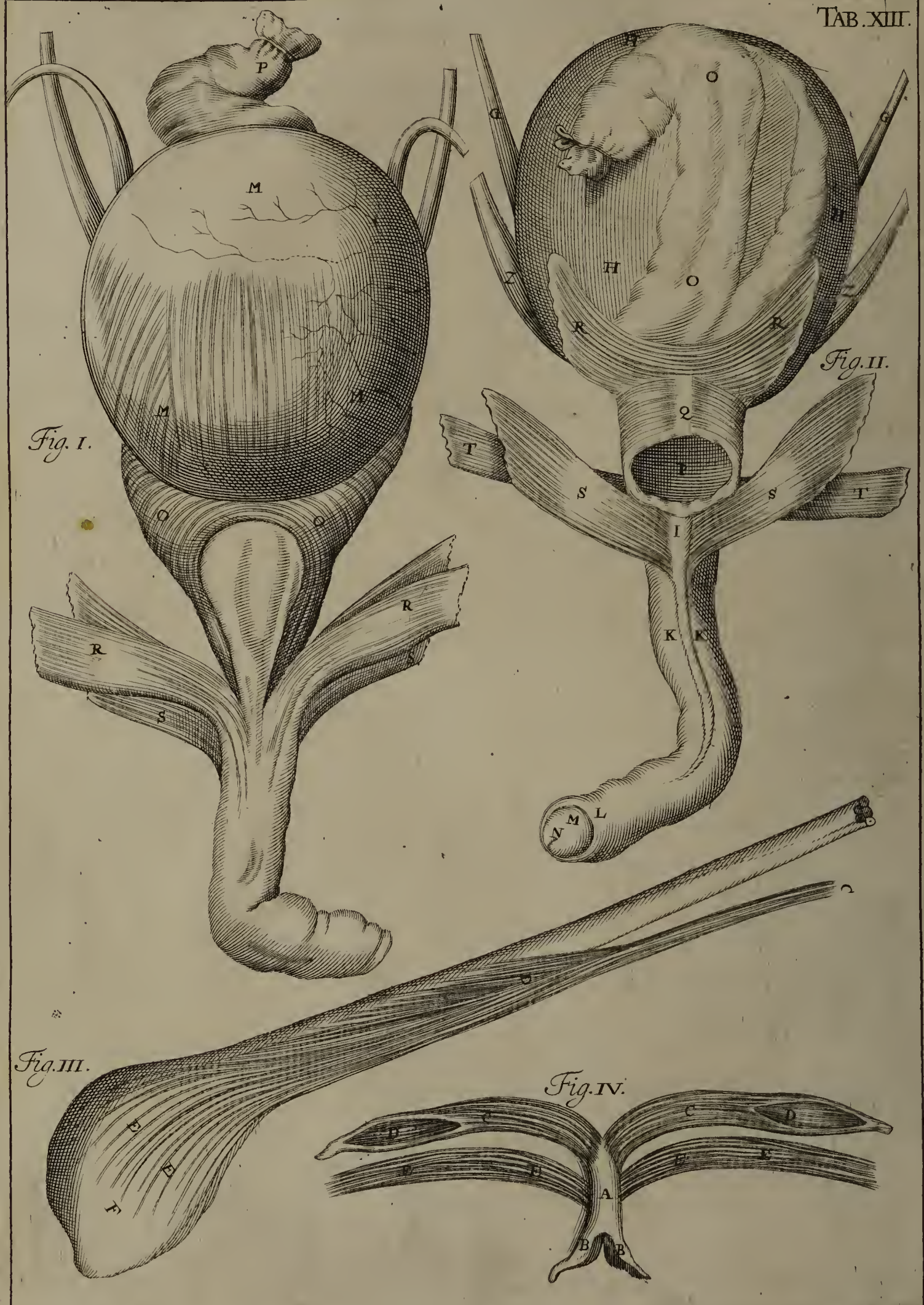
*This lets
it out.*

THis is said to arise between the common, and second proper Coat of the Bladder, the first Coat properly being his, if not him, and therefore it is very Fabulous, which some Physitians so strongly contend for, that besides the former they will allow the Bladder many other Muscles, but in truth the best of Authority doth not afford any other of the Bladder besides these two already named.

This Muscle therefore is only the middle Coat of the Bladder, which consisting of Carnous Fibres running length-ways serves to the expulsion of the Urine. The tone of these Fibres is much injured when the Bladder is overmuch distended with Urine, or when it is held too long.

M. M. M. Shews this, *Tab. 13. Fig. 1.*

Diaphragma.



The Explanation of the Thirteenth Table.

C D. Cremasters at Fig. 3.
S. S. Erector Penis at Fig. 1.
T. T. Shews the same laid bare at Fig. 2.
R. R. Accelerator Penis at Fig. 1.
S. S. Shews the same laid bare at Fig. 2.
C. C. Musculi Clitoridis at Fig. 4. and at D. D. E. E.
R. R. Levatores Ani at Fig. 2.
Q. Sphincter Ani at Fig. 2.
O. Sphincter Vesicæ at Fig. 1.
M. M. M. Detrusor Urinæ at Fig. 1.

Diaphrag

The History of the Town of

St. John's, New Brunswick
from its first settlement
in 1609 to the present time
by J. B. H. ...
St. John's, N. B.
1880

Diaphragma.

THis Muscle hath its Origination from the first Vertebre of the Loins, obtaining a circular Figure, and much different *in situ* from other Muscles, answering in magnitude the transverse bottom of the *Thorax*, and is inserted into the forepart of the *Sternum*, and Termination of the True Ribs, and to the twelfth Rib, as also to the extremities of the bastard Ribs, on the Sides.

This distinguishes the lower Belly from the middle.

It is in its middle (for its greater strength) Membranous and Nervous, to which middle the Flethy Fibres do run as to their Center: Wounds happening in this Center, are reputed Mortal, because hence suddainly doth follow a present decay of Respiration, and very troublesome Convulsions, whereas Wounds happening in the Flethy parts hereof, are void of this danger allowed by *Galen*, and this is confirmed by various examples.

obs.

The *Diaphragma* borrows its Origine from the Vertebres of the Back near the Loins, and round the Termination of the Ribs and *Ensiformis Cartilago*, and hath its Tendon in its Center or middle of it: and by contracting it self, moveth downward, bringing it self from an Arch toward a Plain, and so enlargeth the Cavity of the *Thorax* to give way to the blown up *Lungs*, inspired with numerous Particles of Air.

use.

Next to this should I have Discoursed of the Heart, that Royal Muscle of the Body, by the Reciprocal motion of whose Fibres all that Blood is let both into it and out of it, by which our Human Pile is kept up and preserved: but Doctor Lower having already so fully written hereof, and also given such exact Figures of all its variety of Fibres, I recommend the Reader wholly to his Book De Corde, my task more properly relating to those of the Artus.

This you have at *Tab. 16. Fig. 2.*

Here

Here let the Body be turned upon its Face.

Cucullaris sive Trapezius.

*This mov. s
the Scapula
variously.*

Use.

THis is the first, the which with its Companion doth very aptly express a Monks Hood : it takes its Origination Fleshy from the lower part of the *Os Occipitis*, and from the Spines of the Vertebres of the Neck, and the eight upper Spines of the *Thorax*, and springeth Membranous, broad, and running externally towards the *Scapula*, grows narrower, and is insertèd into the whole Spine of the *Scapula*, and near half his Basis, as also to part of the *Clavicle*, by a broad, Nervous, and Fleshy Origination, and by the variety of Fibres allowed it, it is variously moved, as upwards, downwards, directly, obliquely, according as its Fibres are variously contracted ; Divide this Muscle from its partner at their Originations from the Spines of the Vertebres, and being so followed and cleared from the *Os Occipitis*, the Muscles underneath this will much better appear.

And I conceive another Use of this Muscle may be to fasten the *Scapula* to the Vertebres of the Neck and *Thorax* ; but the chief Use of it is to move the *Scapula* obliquely upwards.

This you have at *A. A. A. B. Tab. 14. B.* Shews its Tendinous Insertion into the *Scapula*, *a. b. c.* Its three sorts of Fibres.

Latissimus

Latisfimus Dorfi, five Anifcalptor.

THis *Abducent* Muscle, or *Latiffimus* is fo called from its magnitude, the which with its Companion doth near cover the Back, it arifeth with a large Membranous beginning from the Spines of the Vertebres of the *Thorax*, between the *Os Sacrum*, and the fixth Vertebre of the *Thorax*, as alfo from the upper part of the *Os Ileon* : his Origination here is chiefly Membranous, but running higher, fo foön as it attains the curvation of the Ribs, he grows Flefhy, and in his afcenfion becoming narrower, is carried over the lower Angle of the *Scapula*, and by a ftrong and fhort, but broad Tendon, he is implanted below the upper head of *Os Humeri*, between the *Pectoralis* and *Rotundus*, great care must be had, left in the raising this Muscle from his Origination, you do take up the Origination of the subjacent Muscle *Serratus Major Posticus*, and if you be not very careful in your diffection, you will borrow from *Quadratus Lumbi*, as you raife him from the *Ileon*, to which he firmly adheres ; as alfo near the *Scapula*, *Serratus Major Anticus* will arife with him, without mature and deliberate observation hereof: this brings the Arm backwards, fometimes upwards ; its diversity of Fibres contracting themselves doth occasion these variety of Motions.

This brings
the arm
backwards to
the Funda-
ment.

vp.

This is shewn at *Tab. 13.* at *C. C. D.* *C. C.* Shews its Origination, *D.* Shews where its Tendon arifeth, *N. N. O. O.* Shews the same laid bare at *Tab. 15.*

Z

Rhom

Rhomboides.

*This brings
the Scapula
backwards.*

use.

THis is so called from *Rhombus*, the which is by Mathematicians said to be a foursquare Figure, not consisting of equal Angles, but of Lines: it ariseth broad and Flethy immediately under the *Cucullaris*, from the Spinal processes of the three lower Vertebres of the Neck, and three upper Vertebres of the *Thorax*, whence running with thin Fibres, it descends down to the *Scapula*, to whose whole Basis externally, it adheres broad and Flethy; in the raising of this, take care that you do not raise the Tendon of *Serratus Posticus Superior*, who lies just under him. And also because it taketh its Origine from the three lower Vertebres of the Neck, and the three upper of the *Thorax*, and is inserted into the Basis of the *Scapula*, whereupon it doth assist the *Cucullaris*, and bind the *Scapula* backward to the lower part of the Neck and upper part of the *Thorax*.

This Muscle holds the *Scapula* to the Back: hence Consumptive people have prominent *Scapula's* from the weakness of this Muscle; from this also in some Persons may an account be given of the Gibbosity of this part.

This you have at *Tab. 15. at B B. in situ, c. c. c. c.* Shews its Origination, *G.* Shews the same laid bare at *Tab. 24. h. h. i.* Shews its beginning and ending.

Levator

The History of the County of York

By John Smith
A.D. 1674

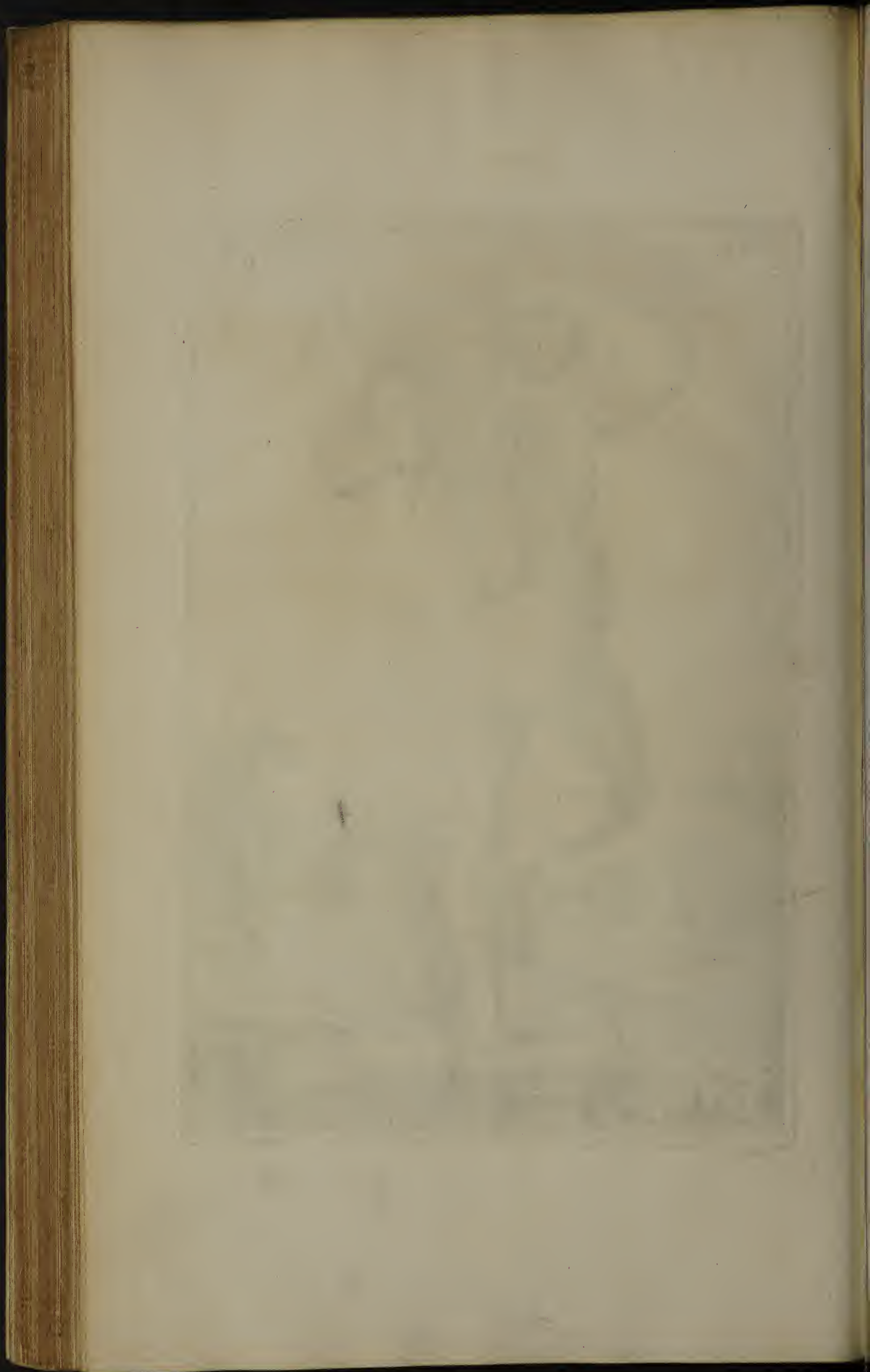
1674

The Explanation of the Fourteenth Table.

A *A. A.* Cuctillaris.
B B. Shews one part thereof laid bare.
C. C. Levator Patientiæ.
D. D. Rhomboides.
G. G. G. G. Latissimus Dorsi.

Levator





Levator Patientiæ.

THis is also called *Scapulam Attollens* : This ariseth from ^{This brings it forwards.} the second, third, fourth, and fifth Transverse Processes of the Neck, and hath as many Originations with their *Interstitia* : these joyning do descend, and adjoyn to the whole upper side of the *Rhomboides*, until it is inserted by a broad, Flethy Tendon to the highest, as also to the lower Angle of the *Scapula*, and doth draw the same upwards and forwards, and is raised with the Arm. Use.

This Muscle had its name from *Spigelius* : it bearing many heavy burdens, for the *Scapula* by the help hereof with the Arm is lifted up forwards, and hence takes the better name of *Patientiæ*.

This you have at *Tab. 15.* at *A.* laid bare, 1. 2. 3. 4. Shews its four beginnings.

Rotundus

Rotundus Major.

This draws the Arm down backwards.
THis is also called *Humerum Deprimens*, its also called *Rotundus*, it being Sphærical; it ariseth with a Flethy beginning from the lower Angle of the *Scapula*, and adheres Flethy from his lower Rib, and having marched half way, deserts, and being indifferently dilated somewhat upwards, is inserted by a short, broad, and strong Tendon into that part of the *Os Humeri* where *Pectoralis* hath his insertion, and doth draw the Arm down backwards. It partly lies under the Arm-pit.

use.
obs. Its generally observed by all Masters of Anatomy, that all Depressers are much less then the Attollers in Human Body. Thus the *Temporalis* is the strongest Attollent of the lower Mandible, and *Biventer* is the most infirm Depriment, and the reason is, there is required much more for the lifting up of a weight, than for his bringing down.

This you have at *Tab. 15. at E.*

Rotundus

Superfca

Superfcapularis Superior five Supra-
spinatus.

THis is Flefhy and long, and preffeth the whole *Scapula* This brings it about outwards. upwards: it arifeth from the whole Basis of the *Scapula* Flefhy above the Spine, filling the whole Cavity between the Spine and the upper Rib of the *Scapula*, and going back to the neck of it, paffeth under the fecond Ligament of the *Humerus*, as the Biceps doth, and is inserted by a broad and ftrong Tendon obliquely into the neck of the *Os Humeri*, and doth bring the Arm about with the former; others do affirm that it moves the Arm upwards with the *Deltois*. And I apprehend that a great Ufe of this Mufcle is to help the *Coracobrachialis* and *Infraspinatus*, in lifting up the Arm. Ufe.

This you have at *Tab. 15.* at *F. L.* Shews the fame laid bare.

A a

Super.

Superfascularis Inferior sive Infraspinatus.

*This brings
the Arm a-
bout out-
wards.*

Use.

THis covereth the whole Exteriour part of the *Scapula*, which under the Spine, arising from almost the whole Basis of the lower part of the *Scapula*, and possessing the *major* part of that Cavity, Flethy, running backward, narrows himself according to the form of the part, and by a broad Tendon is inserted into the Ligament of the *Os Humeri*, as some will have it; But I humbly conceive, That this Muscle according to its situation, doth more probably assist the *Deltoides* and *Coracobrachialis*, lifting the *Os Humeri* upward.

This you have at *Tab. 15.* at *G. M.* Shews the same laid bare.

Nonus

Nonus Humeri Placentini five Rotundus Minor.

F *Allopius* calls this *Transversalis Brevior* from its site, and *Rotundus* from its form : It ariseth sharp and Fleshy from the lowest Angle of the *Scapula*, at his Basis, and growing more Fleshy to its Venter, decreases again, and terminates himself by a sharp Tendon into the neck of *Os Humeri* ; This by some Anatomists is held as a part of that Muscle called *Rotundus Major*. This helps the motion of Rotundus Major.

This Muscle depresseth the *Os Humeri*, and is an Antagonist to the *Deltoides* and *Coracobrachialis*. vfe.

This you have at *Tab. 17.* at *Fig. 2.* at *A. B. C.* *A.* Shewing its Fleshy beginning, *B.* Its Cavity or Fissure, *C.* Its thin and Nervous Tendon ; This you have also at *Fig. 1. Tab. id.* at *P. P. Q. Q. Q.* Shews the Nerve that passes through this into other Muscles.

Subscapularis.

Subscapularis.

*This brings
the Arm in-
wards.*

THis is seated in the Cavity of the *Scapula*, and possesseth the whole Cavity thereof: it ariseth Fleshy from the whole inward Basis of the *Scapula*, and so running forwards, according to the dimensions of the Bone, narrowing himself, and by a broad Tendon, is inserted into the third Ligament of the *Os Humeri*.

Use.

These last Muscles do work the whole Arm about, from whence they have also their names, but the *Subscapularis* brings it inwards, the *Superscapularis Inferior* outwards, and also upwards, but these together do moderately elevate it; their Use may be most commodiously shewn, if the whole Arm be put into a middle Figure, and afterwards, neither abducted from the Breast to the Arm, neither the middle Figure changed with the Cubite of the Arm, the Cubitus being drawn outwards, and again brought inwards.

This you have at *Tab. 11. at C. C.*



The Explanation of the Fifteenth Table.

- A** Shews Levator Patientiæ.
B. B. Rhomboides.
C. C. C. C. Shews the Spines of the Vertebres, from whence they do
take their Origination.
E. Rotundus.
F. Superscapularis Superior.
L. Shews it laid bare.
G. Superscapularis Inferior.
M. Shews it laid bare.
a. Octavus Humeri Placentini.
v. Shews it laid bare.
-

If

The Explanation of the Present Table.

A Table of the present state of the British Empire, from which the following facts are taken, and which are the result of the most accurate and extensive researches, and the most judicious and impartial consideration of the most authentic and reliable sources of information.

If the whole Arm with the Scapula be taken off, the dissection of these following Muscles will with more ease be performed.

Deltois.

THis is accounted the second Muscle of the Arm, called ^{This lifts up the Arm.} by some *Triangularis Humeralis*, arising generally Nervous; First, forward from the middle of the *Clavicle* where it is broadest, next the *Os Humeri*; Secondly, from the top of the *Scapula*, where it is joyned to the *Clavicle*; Thirdly, from the whole Spine of the *Scapula*, these Originations presently growing Fleshy, descending and narrowing become a strong Tendon, externally Fleshy, internally Nervous, which is transversely planted under the neck of *Os Humeri*; this ^{use.} lifts up the Arm sometimes directly, sometimes forwards, or backwards according to its Series of Fibres, these being contracted: In the middle part hereof unexperienced ^{Caution.} Chirurgeons do make *Fontanels*, but very inconsiderately, because this Muscle being contracted, the Orifice of the *Fontanel* therein made is also therewith contracted, sending thereby the Pea forth with force and pain, and the Issue doth heal up presently; which Errour may with ease be shunned, if they made them in the distance between this and the *Biceps*, four or five Fingers breadth from the joynt of the Arm, in which place, when the Arm is bent, there is presently perceived this Interstitium.

This you have at *F. F. Tab. 16. H. H. I.* Shews the same laid bare.

B b

Biceps.

Biceps.

This Muscle
bends the
Cubite.

THis Muscle ariseth with a double beginning, arising first externally from the top of the *Acetabulum Scapulae* by one Substance, and so runs under the Ligament of that Juncture over the head of the *Os Humeri*, and through a Channel insculpt for it, where it is bound in by a proper Ligament; secondly, arising broad, Flethy, and Nervous from the *Coracoidal Apophysis* of the *Scapula*, and is carried over the internal head of the *Os Humeri*, and so descending meets with the other, and makes one strong and Flethy Muscle, and narrowing himself becomes a strong, thick, large, and Nervous Tendon, and is inserted into an Oblong Prominence under the upper head of the *Radius*.

Caution.

Its this Tendon which generally doth lie under the middle Vein of the Arm, which cautioneth all young Chirurgeons to beware of it in *Vena Sectione*, for it produceth great danger to the Patient: for Wounds received here are of very great Consequence, because both Veins, Nerves, and Arteries are very relative to it and bordering upon it, the which, of what direful consequence it hath been many Masters of our Art in this Honourable City can both evince and certifie.

Use.

This *Biceps* bendeth and listeth up the Cubite.

This you have at *Tab. 16.* at *L. M.* And at *Tab. 17.* at *G. H. I.* you have the same, *G.* Shewing its first head, *H.* Another head of this Muscle, *I.* Shewing its Flethy belly, *K.* Its thick and Nervous Tendon.

The Explanation of the Sixteenth Table.

A Serratus Major Anticus.
a. a. a. Shews its Originations.

B. Pectoralis. *c. b. d. Shews its diversity of Fibres.*

F. F. F. F. Deltois. *H. H. I. Shews it laid bare.*

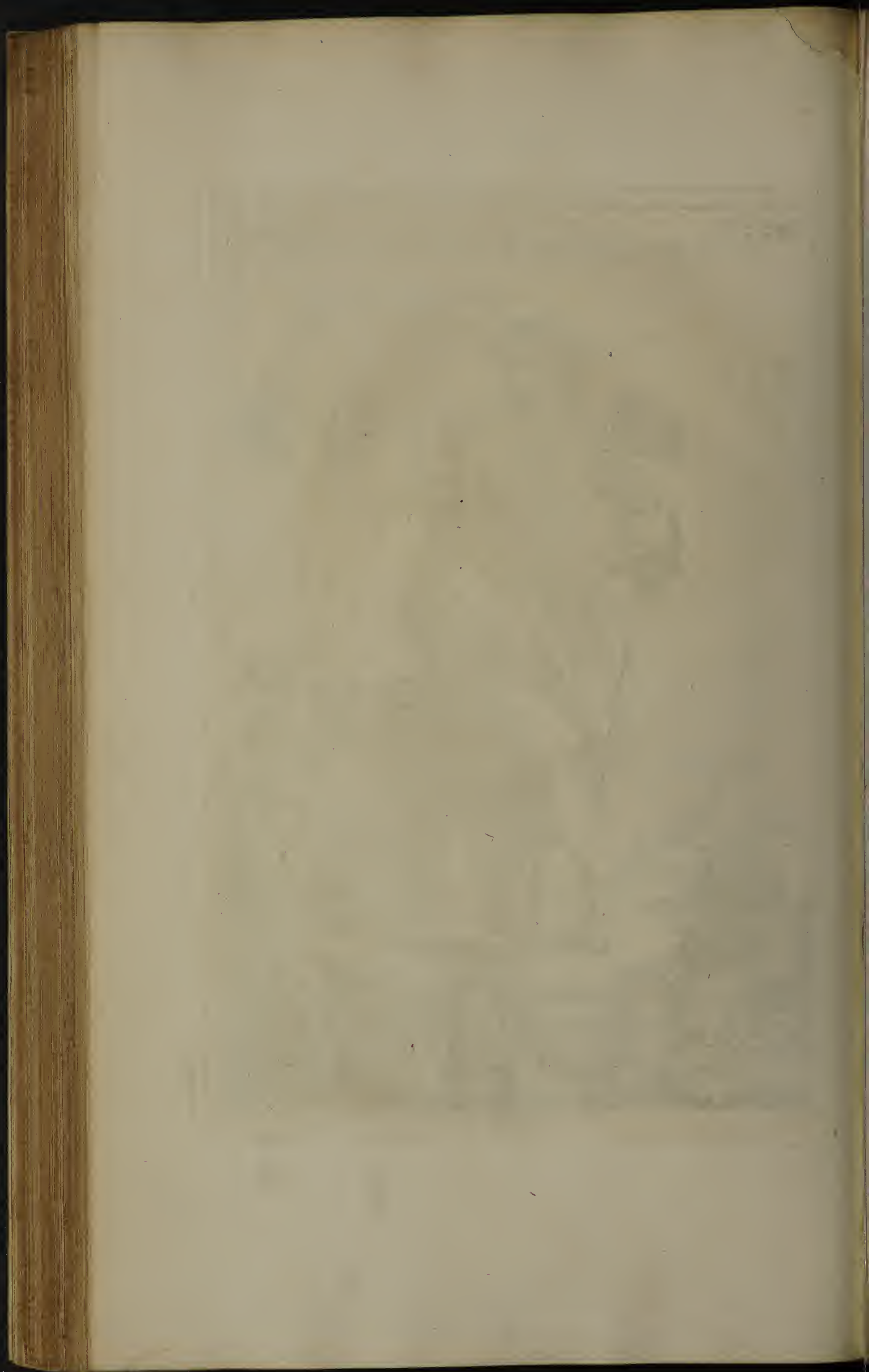
L. M. Biceps in situ.

K. *Shews the same somewhat laid bare.*

X. *Shews Brachieus in situ.*

Octavus





Octavus Humeri Placentini, five Perforatus seu Coracobrachialis.

THis ariseth by a short and Nervous Origination from the *Coracoidal* process of the *Scapula*, near the Origination of the *Deltois*, and so descending, becomes somewhat long, large, and Flethy, and is implanted by a strong Tendon into the middle of the *Os Humeri*, and doth adduce it with the *Pectoralis* forwards to the Breast, as some would have it; the Venter hereof is perforated, and through the body of this Muscle doth pass a Nerve, which serves the rest of the Muscles; *Riolan.* reckoned this Muscle to be a part of the *Biceps*, or of the first Muscle of the Cubite, which doth contradict *Autopsy*.

This draws the Arm upward.

Use.

And I do humbly conceive that this Muscle in truth doth assist the *Deltoides* in bending the Arm, and lifting up the *Os Humeri*.

This you have at *Tab. 15.* at *a.* in its place, *b.* Shewing the same laid bare.

Brachiaëus

Brachiaëus Internus.

*This bends
the Cubite
forwards.*

THis Muscle lodgeth under *Biceps*, but is more short and Flešhy : it ariseth about the middle of the *Os Humeri*, near the insertion of the *Deltoides*, and *Pectoralis* double, broad, and Flešhy : partly by the Exterior, partly by the inner side of the said Bone, but presently joyning, and firmly adhering to the Bone, in its descent becoming large, till at last it terminates broad and Flešhy in the Ligament of the Joynt, as well as in the Appendices of the Cubite and *Radius* ; This with the *Biceps* doth very strongly contract the Cubite, lifting it up, being an assistant to the *Biceps*

Use.

This you have at *M. N. O.* at *Tab. 17. M.* Shewing its beginning, *N.* Its Venter or Belly, *O.* Its large and Flešhy Tendon.

Gemellus

Brachiaëus

Gemellus Major, Brachiaëus Externus,
aut Longus.

THis Muscle ariseth doubly broad and strong, partly ^{This extends the Cubite.} Flethy, partly Nervous, from the lower part of the *Scapula*, where it hath a peculiar Cavity a little under the neck of it: and growing Flethy descends, and joyns himself to the inner side of the *Os Humeri*, where he meets with his other Flethy Origination, and so making one, is carried down to the inner side of the *Process* of the *Olecranon*, and is there implanted; The Use of this Muscle is generally reputed ^{Use.} to extend the Cubite, and is an Antagonist Muscle to the *Biceps Internus*, which is a Flexor and lifter up of the Cubite: and the *Biceps Externus* doth extend it, and put it backward and depress it.

This and its following partner you have described at R. R. S. S.
Tab. 17. R. R. Shewing its beginnings, S. S. Its double Venter.

C c

Extens

Extensor Cubiti Brevis, vel Brachiaëus Internus.

*This doth
assist the for-
mer in its
extension.*

Use.

THis is the second of the Extenders of the Cubite, and doth arise backwards Nervous from the neck of the *Os Humeri*, and so becoming Fleſhy, descends to the middle of *Os Humeri*, and doth inseparably mix himself with the former, and at length is inserted partly Fleſhy, partly Nervous into the outward side of the *Olecranon*, about the place we lean on. These two Muscles as they have right Fibres given them from their beginning to their ends, they do extend the Cubite directly, as the two former did contract it.

Veslingius says this Muscle arises from the middle of the *Os Humeri*, and it is accordingly represented so in his Cuts.

This and its partner you have shewn at R. R. S. S. at *Tab. 17.*

Anconæus.

Fig. 1.

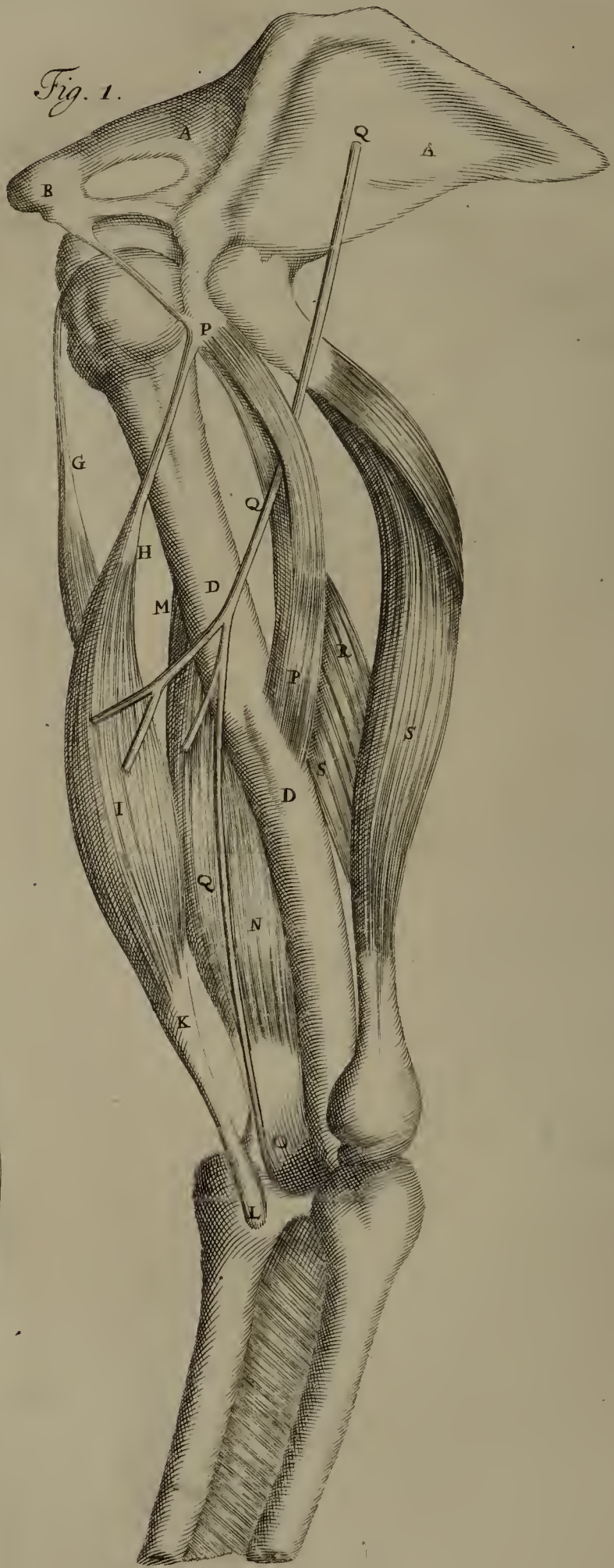
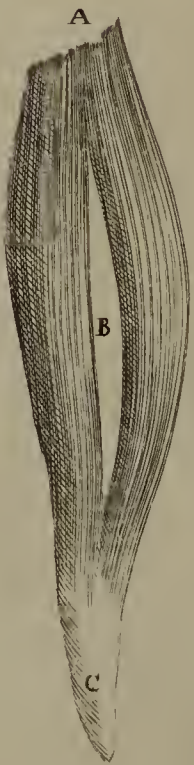


Fig. 11.



The Explanation of the Seventeenth
Table.

M N. O. Brachieus Internus.
R. R. S. S. Gemellus Major.
Gemellus Minor *you have also in the same Table.*

Anconæus.

The Table of the Contents

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Anconæus.

THis being but a small bodied Muscle, doth arise from the lower and back part of the *Os Humeri*, being ^{This doth also extend the Cubite.} planted between the *Cubitus* and the *Radius*, and is inserted with a Nervous Tendon (sometimes obliquely) into the lateral part of the *Ulna*, a Thumbs length below the *Olecranon* or Elbow ; As those two last do help forward the *Cubites* extention, this doth help the former, &c. Use.

This is not to be shewn or represented by Figure.

Palmaris.

Palmaris.

*This moves
the Palm of
the Hand.*

THis ariseth round and Nervous, from the inward Extuberance of *Os Humeri*, and presently becoming Fleishy and narrow, about the middle of the Cubite is carried somewhat obliquely, and is turned into a long and round Tendon, and passing over the inward Ligament of the *Radius* comes to the Palm and there doth expand it self into a most broad Tendon, and is laterally inserted into the first Joynts of the Fingers, and is so closely fixed to the *Cutis*, that it is not thence to be separated without difficulty ; The contraction of this *Cutis* occasioneth apprehension, and doth endue the Palm of the Hand with an Exquisite Sense, and the Skin becoming immovable by the gripe, it occasioneth a more steady keeping of any thing therein contained

obs. The learned *Fallopious* hath observed this Muscle sometimes to be double in either Arm, and arising from the same place, that one doth end in a broad Tendon, such as already is described, the other, in the Transverse Ligament of the *Carpus*.

This you have at *Tab. 18. Fig. 1.* at *D. E.* Shews where it passeth into a Tendon, *b.* Shews the expansion of the same Tendon, *G. G. G. G.* Its Terminations ; At the same Letter you have the same expressed at the second Figure *Tab. ejusd.*

Caro Musculosa Quadrata.

Near adjacent to the former, is planted a Fleshy Substance ^{This does assist the former.} arising from the *Membrana Carnosa* under *Mons Lunæ*, where the eighth Bone of the *Carpus* is placed, and then marcheth under *Palmaris*, to the middle of the Palm, and is inserted into the outside of that Tendon that separates the little Finger from the rest; this makes the Hand hollow, and the Use hereof is perceived and declared in large contractions of the Palm, drawing the *Mons Lunæ* to the middle of the Hand: this is when we would make it appear very hollow. ^{Use.}

This you have at P. P. at Fig. 2. Tab. 18.

D d

Flexor

Flexor Carpi Interior five Ulnaris.

*This bends
the Wrist.*

THis ariseth sharp, Flefhy and Nervous from the inner *Apophysis* of the *Os Humeri*, and fo running Flefhy the whole length of the Cubite, to which it adheres, hath its Infertion at the Wrist into its fourth Bone, partly Nervous, partly Flefhy, this paffeth not under the Transverse Ligament, but is only wrapt up with the common Membrane of all the Mufcles; Its Ufe is thus, fuch as are the Inflectors do poffefs the whole part, and do arife from the inward Protuberance of the Arm: thofe that do extend, do arife from the back part and outward Extuberance.

ufe.

This you have at *Tab. 18.* at *Fig. 1.* at *R. R. f.* Shewing its Flefhy and Nervous beginning, *g.* Its end partly Flefhy, partly Nervous; This alfo you have at the fecond Figure at the fame Table, at the fame Letter: *K. K.* Shews the fame *in fitu* at *Tab. 19.* at *Fig. 1. b.* Shewing its beginning, *c. d.* Its end as formerly.

Flexor

Flexor Carpi Exterior five Radialis.

THis ariseth as the former from the same Extuberance, and so running somewhat transversly near the outer part of the *Primi Digitorum Flexores*, is fixed to the *Radius*, and a little before it arrives at the *Carpus* doth become a round Tendon, which cleaving to the Transverse Ligament, runneth under him, and enlarging himself, is inserted into that *Os Metacarpi* which stands before the little Finger; these two do contract the Hand.

*This doth
help the for-
mer in its
Contraction.*

These two working together, the *Carpus*, and the Hand with it is also contracted; one only working, its sometimes moved into that side somewhat obliquely which is contracted.

Use.

This you have at *Tab. 18. Fig. 1. & 2.* at *S. S. in situ*, *L.* Shewing its beginning, *M.* Its slender and Nervous Termination, *L. L.* Shews the same at *Tab. 19. in situ*, *e.* Shews there its Fleshy beginning, *f.* The Tendon of this Muscle, *G.* Shews the same laid bare at *Tab. 20. Fig. 1.*

Flexor Secundi Internodii Perforatus.

*This con-
tracts the
second Joynt
of the Fin-
gers.*

Use.

THe Fingers, which are the great Messengers of Writing our Minds, and which are implanted in us for performing of many strong and vigorous Motions, do act these by the benefit of Muscles, by which they are both contracted, extended, and brought to a lateral Use; We begin with the Contractors, these being seated in the Cubite, and those generally do gain the name of Contractors which do bring the four Fingers into a Curvation; Of these Muscles of the Fingers, this is said to be the first, and taketh its name from its Use, contracting the second Bone of the Fingers.

It ariseth from the inward Protuberance of *Os Humeri*, under the former, and so growing broad and Flethy about the middle of the *Cubitus* and *Radius*, somewhat adhereing thereto marcheth forwards, and becomes wholly round and Flethy near the Wrist, where it is divided into four Flethy Portions, from which proceeds so many Tendons, all which are involved in one proper Mucaginous and thin Coat, and so running internally under the Ligament, gets through the Palm, and then doth distribute to the first and second Joynts of the four Fingers, as many Tendons which are perforated a little before their insertion for the transmission of the Tendons of *Tertii Internodii Flexor*. This Muscle by some is called *Sublimis & Perforatus*.

This you have at *Q. Q. Tab. 18.* at both Figures *in situ, d.* Shews its Origination, *e. e.* Its Bivaricated Tendon, *D. D. D. D.* Shews the same at *Tab. 19. Fig. 1.* *C. C. C. C.* Shews it laid bare at *Fig. 2.*

Flexor

The Explanation of the Eighteenth Table.

- D** Palmaris at Fig. 1. *E.* Shews where it passeth into a Tendon.
F. Declares where it expands it self into a broad Tendon.
G. G. G. G. Shews the Termination of these Tendons.
O. O. O. O. Flectentes Pollicem.
Q. Caro Musculosa Quadrata.
Q. Flexor Secundi Internodii Digitorum.
Q. Shewing its beginning at Fig. 2. *e. e.* Its Bivaricated Tendons.
R. Flexor Carpi Interior, *f. g.* Shews its Origination and Termination.
S. S. Flexor Carpi Exterior, *L. M.* Shews its Origination and Termination
V. V. Extensor Carpi Exterior.
X. X. Pronator Radii Teres.
Y. Y. Tertium Pollicis Internodii Flectens.
Z. Z. Pars quædam Flexoris Tertii Internodii Digitorum.
-

Flexor

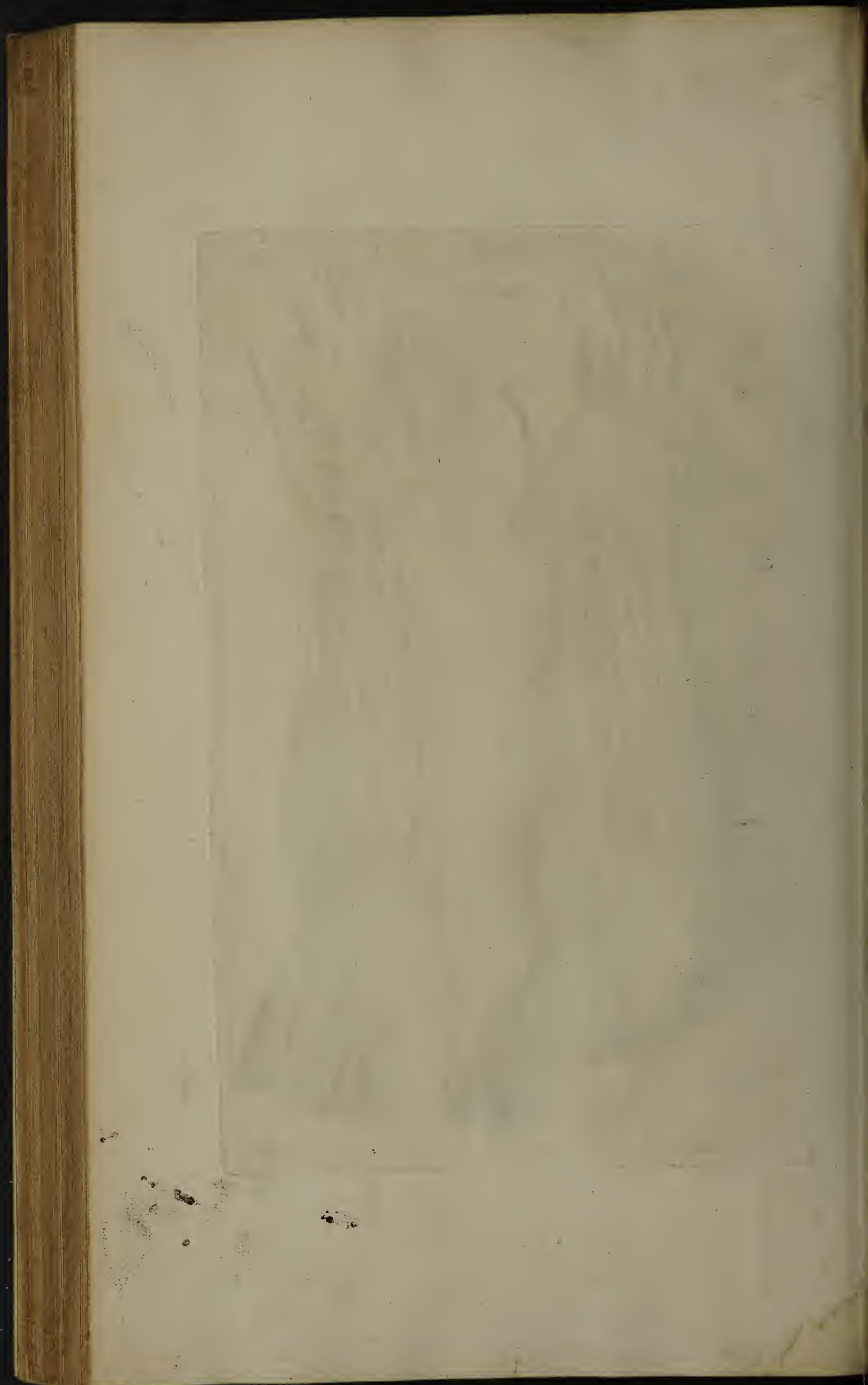
Fig. 1.

TAB. XVIII.

FOL. 108.

Fig. 2.





Flexor Tertii Internodii.

THis doth contract the third Joynt, and from thence doth takes its name : by some it is called *Profundus*, as also *Perforans* ; it ariseth Membranous some part of him, This contract the third Joynt of the Finger. from the same Extuberance as the former, the rest from the Root of the forward process of the *Olecranon*, becoming afterwards exactly round and Fleshy, running under the former, and adhering inwards to the *Cubitus*, on the outward to the *Primi pollicis Flexor*, and descending about the middle of the Cubite, they divide, and make their progress through the Fissures of the others, and are inserted into the third Joynts of the Fingers : and that a right inflection may be made by these Muscles, and that the contracted Tendons may not rise up, and so lift up the *Cutis* in the inward part of the hand according to their length, a Channel being made out of the hard Membranes, they are inwardly included with a fatty and Oleaginous Humour in which they have their free course of Motion.

These Muscles are allowed to contract the third Joynts of the Fingers. Use.

This you have at *Tab. 18. at Z. Fig. 1. & 2.* This you have exactly at *Tab. 19. Fig. 2. at D. D. a. a. a. a.* Shewing its four Tendons.

Flexor Secundi Internodii Pollicis.

*This bends
the second
Joynt of the
Thumb.*

THis *Flexor* is not seated in the Hand, as the former but in the Flefhy part of the Cubite : it arifeth round and Flefhy from the *Os Cubiti*, and fo marching along by the *Radius* to which it adheres, as alfo to the Membrane that joyns the *Cubitus* and *Radius*, it comes to the Wrist, where it becomes a round Nervous Tendon, having alfo a proper thin Mucaginous Membrane, and fo marching forwards, is inferted into the fecond joynt of the Thumb by a fomewhat broad Tendon.

ufe. This contracts the fecond Joynt of the Thumb, to which it is fixed.

This you have at *Y. Y. Tab. 18. Fig. 1.* This alfo you have at *P. P. Fig. 1. Tab. 19.* This you have laid bare at *Tab. 20. at M. M.*

Pronator

Pronator Radii Teres.

THe *Radius* is wrought with two Motions, the one *per accidens*, the other *per se*, and hence hath it given ^{This brings the Wrist downwards.} it two kinds of Muscles : the first from their Uses are called *Pronatores*, the other *Supinatores*. The second of the *Pronators* is called *Teres*, so called from its form, it ariseth from the Root of the inner prominence of the *Os Humeri*, and from the inside of the *Os Cubiti*, and is there joyned by a large Flethy Origination to the *Radius*, and thence descending obliquely downwards by his inner side a little above the middle, is implanted into him Flethy, from whence a Nervous Head doth proceed, which is inserted into the External Head of the *Radius*.

This Muscle is held to bring the *Radius* downwards. Use.

This you have at X. in both Figures *Tab. 18. n.* Shewing its Origination; This also you have at *Tab. 19. Fi. 1.* At O G. *Fig. 2. ejusd. Tab.* you have the same at K. *d.* Shewing its Origination, *e.* Its Termination, C. C. Shews the same at *Tab. 20. Fig. 1. a.* Demonstrating its beginning, *b.* Its Termination.

Pronator

Pronator Quadratus five Inferior.

*This works
as the former.*

THis is allowed the first of the *Pronators*, it is wholly Fleshy, and ariseth from the lower and inner part of the Cubite near the *Radius*, running over the Ligament that joyns the Cubite and the *Radius* transversely, and so doth implant himself Fleshy into the inward part of the *Radius*, with a broad beginning, much representing a Mathematical Square, having four equal sides.

Use.

These two Muscles, while they are contracted towards their Originations, do move the *Radius* forwards, and so doth connect the Hand which the lower part of the *Radius* by the benefit of the *Carpus*.

This you have at *Tab. 19. Fig. 1.* at *I. K.* Shews this, *Tab. 20. Fig. 1. e. e.* Shews its beginning, *f. f.* Its Termination.

Flexores

Flexores Primi Internodii five Lumbricales.

THese are small and slender Muscles, arising round, long, and slender, from those Membranes which do enwrap the Tendons of *Tertii Internodii Flexores*, and so passing on Flethy, are inserted by a round, Nervous Tendon into the first of the Joynts of the Fingers, and are best shewn by raising one from his Origination, and leaving him in his Insertion, and the other *é contrario*, these bends the Fingers laterally. *These bend the Fingers laterally.*

This you have at *F. F. F. F. Tab 19. Fig. 1. G. G. G. G.* Shews their four Tendons, *F. F. F. F.* Shews the same at the same *Tab. Fig. 2. b. b. b. b.* Shewing their Originations, *F. F. F. F.* Shews the same in its place, *Fig. 21. Tab. 21. f. f. f. f.* The beginning of these Muscles, *g. g. g. g.* Shews their Tendons. *vjc.*

F f

Flexor

Flexor Primus, Primi Internodii Pollicis.

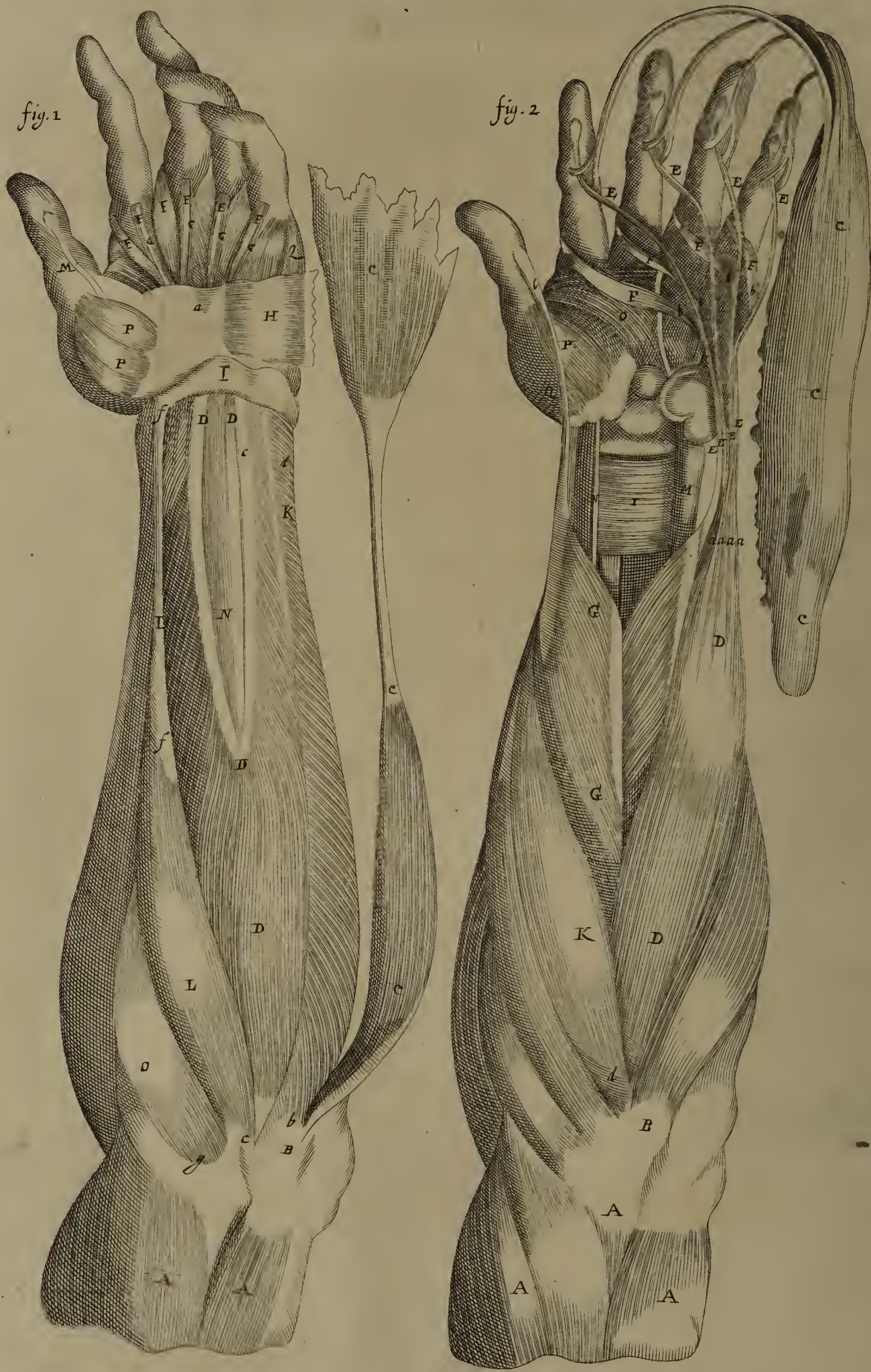
*This bends
the Thumb.*

THe Thumb is bent or contracted in its Joynts, and these after several ways, and hence have they their names severally bestowed upon them, some of these being Contractors of the first, others of the second.

This first ariseth Fleshy from the upper seat of the Annulary Ligament which is in the *Carpus*, near the Thumb, and ascending, doth encompass the first and second Joynts of the Thumb, and is inserted into the head of the first Joynt Fleshy.

This you have at *Tab. 19. Fig. 1.* at *P. P.* This you have also at *A. B. Tab. 21. Fig. 1.* This you have also at the second *Fig. ejusd Tab. at B.*

Secundus.



The Explanation of the Nineteenth Table.

FIG. I.

C C. Palmaris *laid bare.*
D. D. D. D. Flexor Secundi Internodii Digitorum. **E. E.**
E. E. Shews its four Tendons.
F. F. F. F. Lumbricales. **G. G. G. G.** *Shews these four Tendons.*
H. Caro Musculosa Quadrata.
K. K. Flexor Carpi Interior.
L. L. Flexor Carpi Exterior.
O. G. Pronator Radii Teres.
P. P. Pollicem Flectentes.
Q Minimum Digitum Abducens.
R. Pollicem Abducens.
S. S. Carpum Extendens Exterior.

FIG. II.

C. C. C. Flexor Secundi Internodii Digitorum *laid bare.*
D. D. Flexor Tertii Internodii. *a. a. a. a. Shews its four Tendons.*
F. F. F. F. Lumbricales, *b. b. b. b. Shews their Originations.*
G. G. Flexor Tertii Internodii Pollicis *laid bare. c. Shews its Tendon.*
I. Quadratus in situ.
K. Secundus Radii Teres. *d. Shews its Origination.*
O. Primus Secundi Pollicis Articuli Flexor.
P. Flexor Primus Primi Pollicis Internodii.
Q. Pollicem Abducens.

Secundus.

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 Secundus.

THis being smaller then the former, ariseth Flefhy, partly from the fame Ligament, and partly from *Os Carpi*, next the Thumb, and running under the other, is im-
 planted into the fame Joynt from its Root, even to its middle: this is wholly lodged under the former, and is covered over with its breadth.

These two do bend the Joynt of the Thumb, and adduceth it to the Hand. *Riolanus* doth not acknowledge this as a *Flexor*, but rather doth think, that the Muscles arising from the Bones of the *Carpus*, and *Metacarpus*, to be either *Adductors* or *Abductors*.

This you have at *Tab. 19. at M. M. Fig. 1.*

 Secundi

Secundi Internodii Pollicis, Flexor Primus.

*This bends
the second
Joynt of the
Thumb.*

THis Muscle ariseth broad, thin, and Flefhy, from that *Os Metacarpi* that receiveth the Fore-finger a little below his head, and running towards his Thumb grows somewhat triangular, and is inserted by a Membranous Tendon into the head of the second Joynt of the Thumb on the side next the Fore-finger.

Use. This Muscle by most Anatomists is allowed to bend the second Joynt of the Thumb.

This you have at *O.O.O.O. Fig. 1. & 2. Tab. 18. C.* Shews the same laid bare at *Tab. 21. Fig. 2.* This is also shewn *in situ* at *Tab. 18. at i. Fig. both.*

Secundus.

Secundus.

THis ariseth with a broad and Fleſhy beginning, from the middle part of *Os Metacarpi* of the third Finger, ^{*This works as the former.*} running to the Thumb, and is inserted into the middle of the ſecond Joynt thereof, in its inward part.

This Muſcle is ſaid to be next to the former, and thus each do ſucceed one another in place and order; and as touching their proper Uſes, you will meet them all ſummed up together in *Quarto Muſculorum Digitorum*.

This you have at *Tab. 18. at O. O. I.*

G g

Tertius.

Tertius.

*This doth
operate as
the former.*

THis follows the second, and is contiguous to it, this ariseth broad and Flethy from the *Os Metacarpi* of the third Finger, and is implanted into the same with the former.

This Muscle is also allowed to begin where the other ended: all these together do make up that Flethy Mass which our Chirromancers make use of, which you have more fully in the next; they are contracted according to the Bone moving towards the other Fingers, and according to their variety of Operations they do express their diversity of Uses.

This you have at *O. 3. in Tab. 18.* at both Figures; This you have laid bare at *D. D. Tab. 21. Fig. 2.*

Quartus

20

Quartus.

Quartus.

THis ariseth Flefhy from the *Os Metacarpi* of the Little Finger about the middle of it, and running under the other, is inserted into the fame Joynt as the former.

*This brings
the Thumb
to the Little
Finger.*

All these Muscles are Flefhy, of which, the two contracting the first Joynt, with that abducing the Thumb, do constitute that little Hillock of the Thumb so called by Chiromancers; but the third of the second Joynt maketh whatsoever is Flefhy between the Life-Line, and the aforesaid little Hill; these are contracted according as the rest of the Joynts of the Fingers, and they working together, do bring the Thumb to the side of the Little Finger, hereby working the Hand into a hollownes.

use.

This Muscle brings the Thumb up to the great or Fore-Finger.

This Muscle running under the former is not to be shewn by Figure.

The

The Explanation of the Twentieth Table.

FIG. I.

C C. Secundus Radii Terei.
a. Shews its beginnaing, b. Its Termination.
D. D. Carpi Flexor & Extensor Internus *laid bare.*
G. Externus Carpi Flexor *laid bare.*
K. Quadratus.
e. e. Shewing its beginning.
f. f. Its Termination.
M M. Secundi Pollicis Internodii Flexores *laid bare.*
N. N. N. N. Interossei.
P. Minimum digitum Abducens.

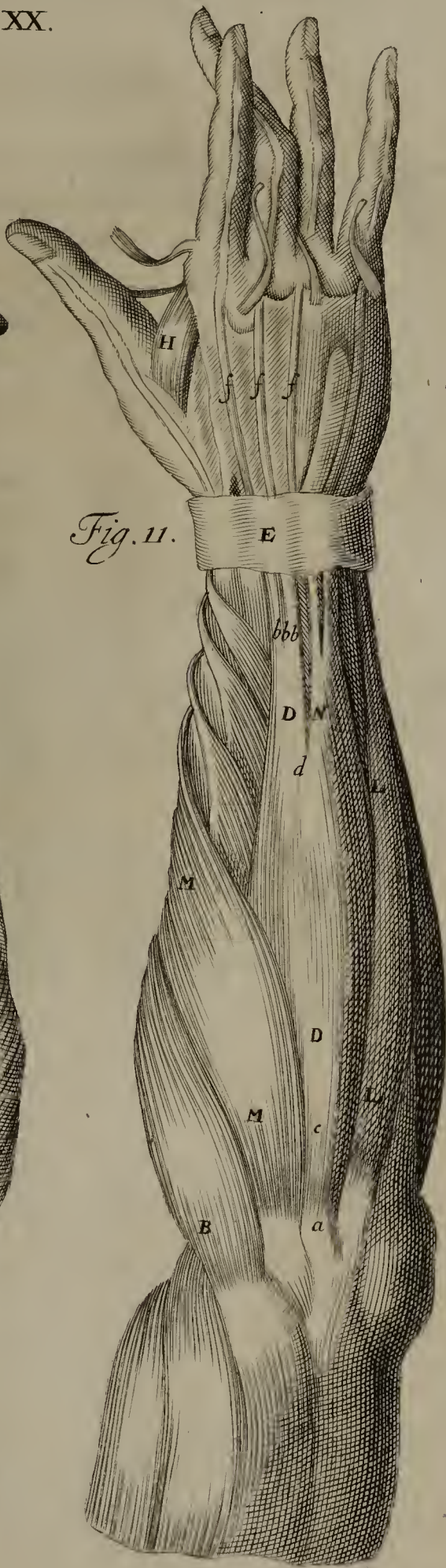
FIG. II.

D. D. Primus digitorum Extensor.
a. Shews its beginning.
b. b. b. Its threefold division, f. f. f. Shews three Tendons belonging to him.
H. Pollicis Adductor.
L. M. Carpum Extendentes.

Fig. 1.



Fig. II.





Minimi Digiti Abductor.

THe Fingers besides Flexion and Extension, and being brought to the sides, are both adduced and abducted; This abdu-
ceth the
Little Fin-
ger. then said to be adduced when they are drawn to-
wards the Thumb; abducted, when they are retracted from
thence: and the Muscles which do perform these Motions are
many, some of which are accounted common, others proper;
the common are commonly reckoned eight, the which from their
site are generally called *Interossei*.

This Muscle called *Minimum Digitum Abducens*, is planted in
the bottom of the Hand under the Little Finger, short and
strong, arising fleshy from the fourth Bone of the *Carpus*, and
so extending it self by the *Metacarpe*, is inserted into the out-
ward side of the first Joynt of the Little Finger.

This Muscle doth abduce the Little Finger from the rest of
the Fingers, and hath given it this particular Use, that whilst
we do apprehend Sphærical Figures, the same time, the Little
Finger is abducted from the rest. Use.

This is call'd also *Hypothenar* by some Authors.

This you have shewn you at *Tab. 19. at Q. Fig. 1.* At *Tab. 20.* you have at *P.* in this place, At *Tab. 21. Fig. 1.* you have it *in situ*, And at *Fig. 2.* of the same Table it is laid bare at *E. E.*

Hh

Pollicis

 Pollicis Abductor.

*This abdu-
ces it from
the Little
Finger.*

THe Thumb when moved laterally, is either abducted from the rest of the Fingers, or adduced; this *Abducens* ariseth Nervous near the *Flexor Primi Internodii Pollicis*, from the Interior part of the Bone sustaining the Thumb; and then becoming Flethy, implants it self by a Membranous Tendon into the first Joynt of the Thumb, and this abduceth it from the Little Finger.

Use.

This is call'd also *Thenar* according to the *Greek* Idiom which names the more protuberant parts of the Palm *δυνατά τῆς δάκτυλου ἀ* *precutiendo*.

This you have at *Tab 19. Fig. 2.* at *Q.* & *Fig. 1.* at *R.* *O.* Shews the same laid bare at *Fig. 2. Tab. 22.* *Æ.* Shews the same in place, *Tab. 21. Fig. 1.*

Pollicis

Pollicis Adductor.

A *Dducens* is that which is seen in the space between the *Pollex* and the *Index*, and ariseth Flefhy from the outward and back part of that *Os Metacarpi* that sustains the Fore Finger, and is inserted Flefhy and broad to the inside of the Thumb to the first Joynt, and doth adduce the Thumb to the Index.

*This brings
the Thumb
to the Little
Finger.*

This is call'd *Antithenar* by some Authors.

use.

This you have at *Tab. 21. Fig. 2. at H.* And at *O. Fig. 2. ejusd. Tab.* At *Tab. 20.* you have it at *Fig. 2. at H.*

Interossei.

Interossei.

*These work
the Fingers
laterally.*

THese *Interossei* are generally accounted eight, Fleſhy and ſmall, and long, ariſing from the Bones of the *Metacarp*, according to whoſe whole length they do march; when theſe do attain to the Roots of the Fingers, they become Tendons, and are laterally inſerted from the firſt to the ſecond Joynts; there are ſix of theſe planted in the three Joynts of the Bones of the *Metacarp*, (*viz.*) two in every one, ſo as one is carried to the inward, the other to the outward Finger, and another thereof belongs to the firſt Bone of the *Metacarp* which ſuſtains the *Index*, and is incumbent in that part which reſpects the Thumb; the laſt adheres to the laſt Bone of the *Metacarpus* in the outward part of the Hand, or in its back thereof.

Uſe.

Theſe Muſcles by how much they do attain the reſt, do alſo extend the ſecond and third Bone, which is firſt obſerved by *Galen* 1 *de uſu part.* 18. and this is the reaſon, why the Extenſor of the Fingers being cut, yet their extension is not quite aboliſhed: for theſe *Interossei* working together, do very excellently perform this Extension, and as they are implanted to the firſt Bone, if either of one of the Fingers be contracted, they do extend the firſt Joynt, if either, it either doth abduce or adduce it.

This you have at *ſ. G. H. H. H.* at *Tab. 2. Fig. 2.* At *Tab. 2.* you have the ſame at *N. N. N. N. Fig. 1.*

Extensor

Extensor Carpi exterior, sive Radiaëus Externus, seu Bicornis.

THis is accounted the first of the outward Muscles of the *Carpus*, it ariseth from the External acuminate part of the Arm, with a broad and Nervous beginning, then growing more Flethy, he runs by the *Radius* according to its length, and arriving half way, it marcheth into a strong Tendon, and is presently inserted with a double Tendon into the first and second Bone of the *Metacarpus*; and hence by reason of its double Insertion and Origination, is by some called *Geminus*. *This extends the Carpus.*

The Use of this Muscle is to extend the *Carpus*. *Use.*

This you have at *Tab. 22. Fig. 1.* at *E. B. B.* Shews the same, *id. Tab. Fig. 2. a.* Shews its beginning, *b. d.* Its Tendinous Termination, *I. K. K.* Shews the same laid bare, *Tab. 23. Fig. 2. I.* Shews its beginning, *K. K.* Its two Venters, *b. b.* Declares its two Tendons produced thence, *L. M.* Shews them also at *Tab. 20. Fig. 2.*

The Explanation of the One and twentieth Table.

F I G. I.

- Æ Pollicem Abducens.
B. Primum Articulum Pollicis Flectentes.
C. C. Abducens Minimum Digitum.
D. *Part of the Tendon of the third Flexor of the Thumb.*
F. F. F. F. Lumbricales.
f. f. f. f. Shews their Originations.
g. g. g. g. Their Tendons.
G. G. G. G. *The four Tendons of the Flexores Tertii Internodii.*

F I G. II.

- B. Primi Pollicis Internodium Flexor.
a. Primi Pollicis Internodium Abducens.
C. C. Primus Secundi Pollicis Internodii Flexor *laid bare.*
D. D. Secundus & Tertius Secundi Pollicis Flexores.
E. E. Duo minimi digiti Abductores.
F. G. G. H. H. Interossei.
b. b. b. The Tendons thereof.
-

Extensor

Fig. I.

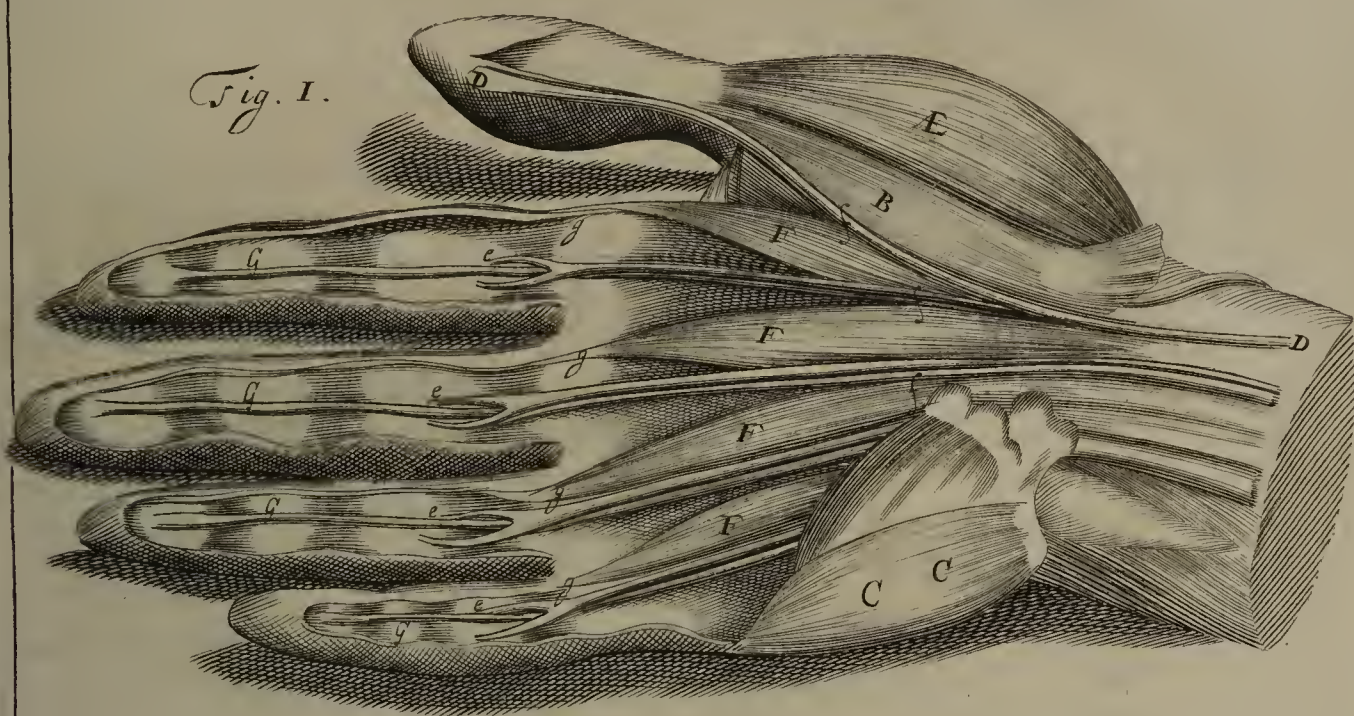
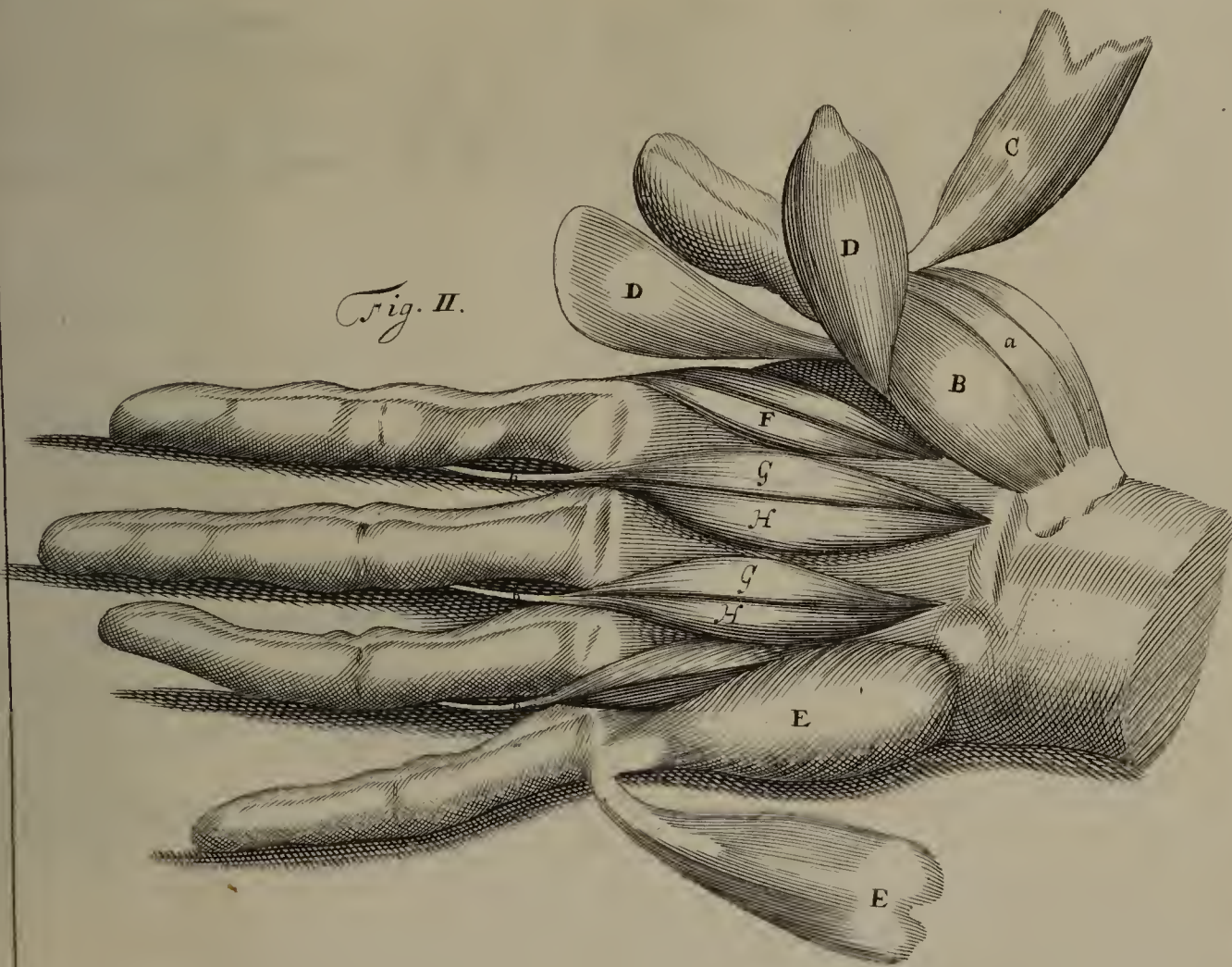
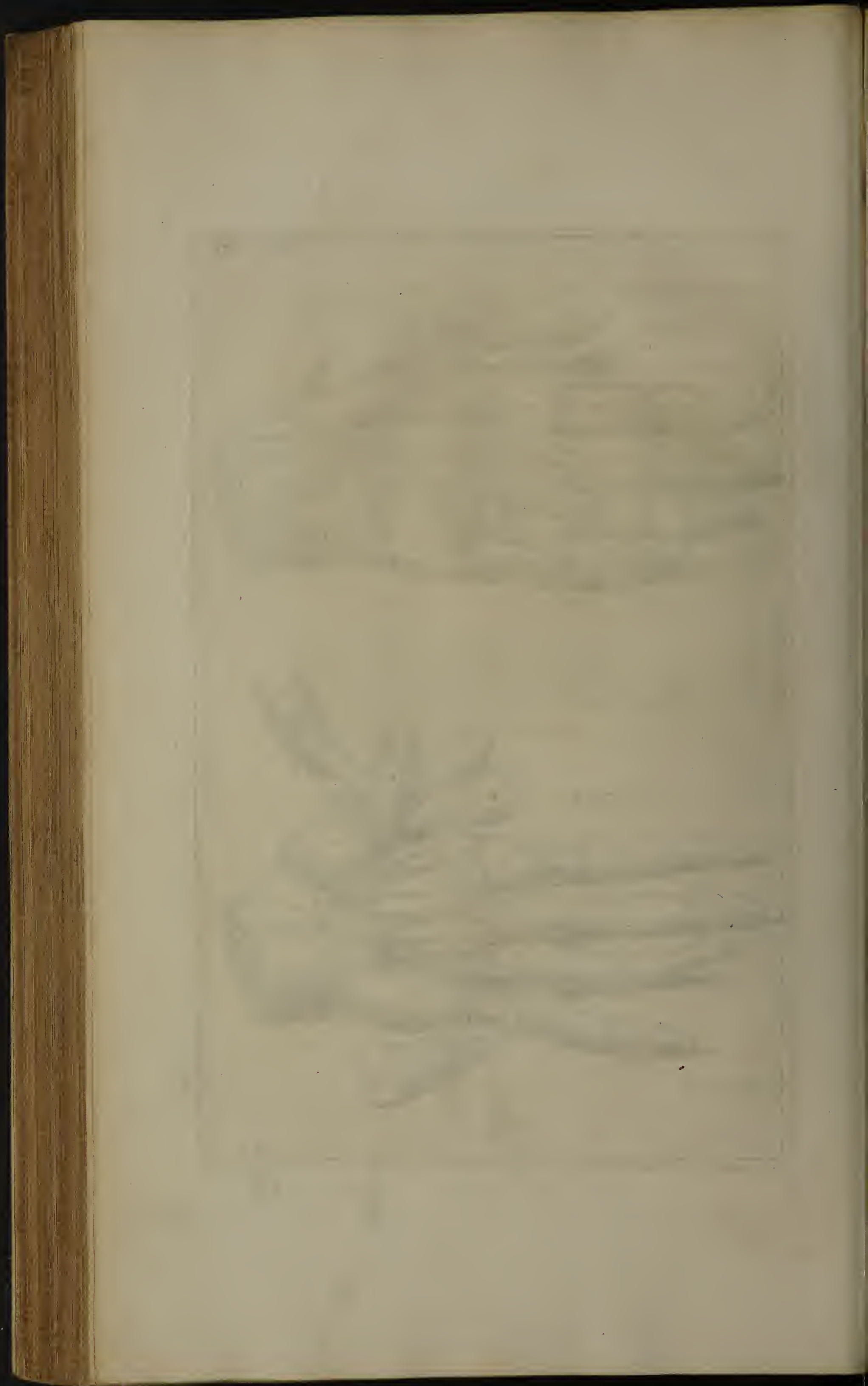


Fig. II.





Extensor Carpi Interior, five Cubitæus Internus.

THis ariseth from the Internal *Apophysis* of the Arm, as This doth extend the Hand. also from the top of the Cubite, and being dilated through the Cubite according to his length near the *Carpus*, is turned into a strong and round Tendon, by which he is inserted into a *Sinus*, above the lower Appendix of the Cubite, and into the upper part of the *Os Metacarpi* of the Little Fingers.

That worthy Observation of these parts is, that all the Flexors are planted in the forepart, and do arise from the inward protuberance of the Arm, and that the Extensors are seated in the back part, and do take their Origination from the outward Extuberance: And thus the Hand by the benefit of the *Carpus*, joyned with the *Radius*, is made either to bend or extend it self. obs.

This you have at *C. C. Tab. 22. Fig. 2. e.* Shewing its beginning, *f. f.* Its Tendinous end, *L. M.* Shews both the Extensors also at *Tab. 20. Fig. 2. H.* The same laid bare at *Tab. 23. Fig. 2. e.* Shewing its beginning, *f.* Shewing towards its Tendon.

Digitorum Secundi & Tertii Internodii
Tensor Communis.

These do extend the second and third Joynts of the Fingers.

AS there were some Muscles which did inflect the Fingers, and others designed for contracting the Thumb, so also are there diverse Muscles appointed for extention of the same; This is nominated as the first of the Extenders of the Fingers, it ariseth partly Flethy, and partly Nervous from the outward *Apophysis* of the Arm, and becoming more Flethy, descending between the two Extensors of the *Carpus*, and then narrowing doth divide it self into three round Tendons, which are included in a common thin Mucaginous Coat, and so are carried under the Annular Ligament, passing which, they divide themselves, and are inserted into the first, middle, and third Fingers, at the second and third Joynts.

use.

These Tendons do reach to the ends of the third Bone, and do lodge under the Nails, whence follows, that such sharp and girding pains do happen in these parts when any Injury falls upon them.

This you have at D. D. Tab. 22. Fig 1.

Minimi

Minimi Digiti Tensor.

THis ariseth sharp and Nervous from the same part as the former, and for near half way is united, to it; so as ^{*This doth assist in extension.*} they seem all as one, but coming to the transverse Ligament, it becomes a round, large, and Nervous Tendon, which is implanted into the first, second, and third Joynts of the Little Finger.

This you have described with the rest.

K k

The

The Explanation of the Two and twentieth Table.

FIG. I.

- C** C. Digitorum Extensor Primus *laid bare.*
a. a. Shews its Tendon.
D. D. Extensor Digitorum Secundus.
E. Carpus Exterior Extendentium.
F Indicem Abducens.
G. Pollicis Extensor Primus.
H. Pollicis Extensor Secundus.
O. Supinator Radii Brevis.

FIG. II.

- B. B.** Carpus Extendentium Exterior.
C. C. Carpus Interior Extendentium.
D. Supinator Radii Brevis.
H. Pollicis Extensor Primus *laid bare.*
I. Pollicis Extensor Secundus *laid bare.*
O. Pollicem Adducens.

Supinator

FIG. I

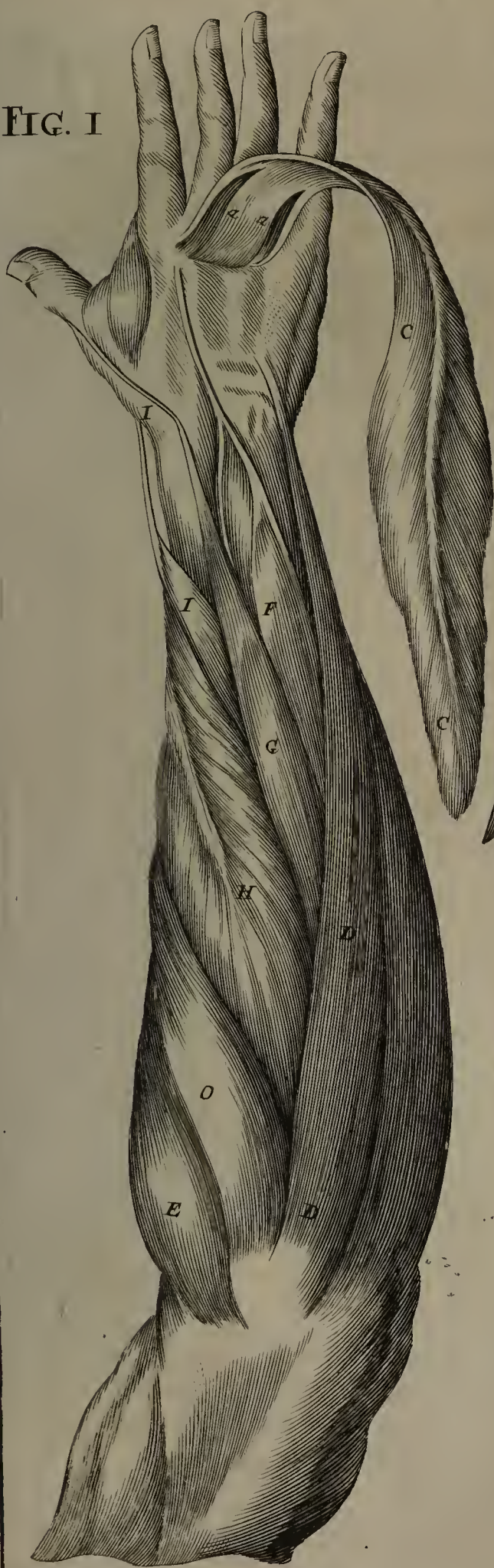
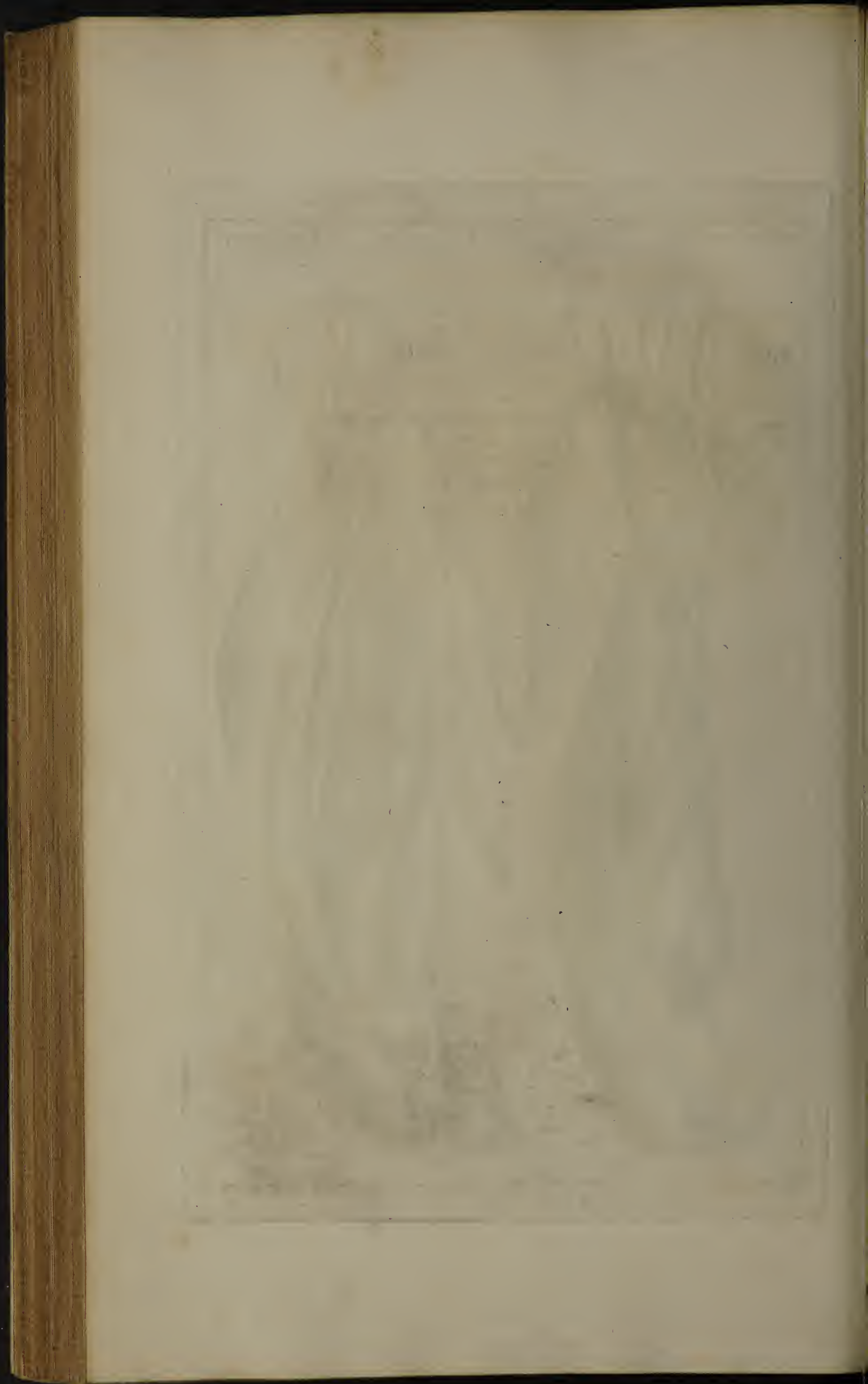


FIG. II





Supinator Radii Longus.

THis is called *Longus*; because it obtaineth the longest belly of all the Muscles which do creep about the Cubite. *This brings the Radius outwards.*

This ariseth from the middle of the *Os Humeri*, and running obliquely over the *Radius*, at its bottom it becomes a Membranous Tendon, and is fastned to the upper part of the Appendix of the said *Radius*, inclining somewhat inwards.

If this and its Companion be contracted towards their Originations they do move the *Radius* forwards, as also the Hand, the which is tied to the lower part of the *Radius* by the benefit of the *Carpus*. *Use.*

This you have at *Tab. 23. Fig. 1.* at *C. a.* Shewing its beginning, *b.* Its Tendon, *D.* Shews the same laid bare at *Fig. 2. Tab. 23. a.* Shews its beginning, *b. b.* Its Tendon.

Secundi

Secundi & Tertii Pollicis Tensor.

*This extends
the second
and third
Joynts of
the Thumb.*

THis ariseth from the same place of the Cubite as the former, and ascends obliquely over the *Radius*, and divides its self into two unequal parts, yet closely adhering, and is carried in a proper Channel at the Appendix of the *Radius*: the upper part remaining somewhat Flethy, yet at last becomes a round Tendon, and is inserted into the *Os Carpi* which receives the Thumb; the other being presently subdivided into two small pieces of Flesh, do at length become Tendons: the first of which is inserted into the first Joynt of the Thumb, the other by a Membrane, fixeth its self to the second and third Joynts of the Thumb.

This you have at *Tab. 22. at H. & I. Fig. 1. 1. At Fig. 2. ejusd. Tabul.* shews the same.

Indicem Abducens.

THis ariseth with a Flethy Origination from the middle of the Cubite, and so running obliquely to the Appendix of the *Radius*, it becomes two Tendons, which by a proper Sinus in the said Appendix are transmitted under the Annular Ligament over the *Metacarp*, and the upper Tendon is carried to the Root of the Little Finger, the other is implanted into the Root of the second Finger obliquely, that it may abduce from the Thumb: it is accompanied with two Extensors of the Fingers in the lower Joynts, as the second and third.

*This moves
the Fingers
laterally.*

This you have at *F. Fig. 1. Tab. 22.*

133

L 1

Supina

Supinator Radii Brevis.

*This helps
Longus in
its Motion.*

THis being shorter and thinner than *Supinator Radii Longus*, ariseth from the Exteriour part of the Ligament of the lower Head of *Os Humeri*, and from the process of the Cubite; and running obliquely (outwardly Membranous, inwardly Flethy) doth recover the middle of the *Radius*, and is strongly implanted into it.

Use.

These two Muscles if they do work together, they do contract the *Radius* forwards and outwards, and so do bring the Hand upwards: but the one draws the part downwards, and the other draws it upwards.

This you have at O. *Tab. 22. Fig. 1. D.* Shews the same at *Tab. ejusd. Fig. 2. D.* Shews the same at *Tab. 23. Fig. 2. c* Shewing its Insertion into the *Radius*, *E.* Shews it at *Fig. 2. ejusd. Tab. c.* Shewing its Origination, *D.* Its Tendon.

Primi Internodii Extensores.

They arise Fleſhy, round, long, and ſlender from the Bones of the *Metacarp*, and ſo running to the Roots of the Fingers, are laterally inſerted to the firſt and ſecond Joynts of the Fingers, and are to be raiſed as the *Flexores primi Internodii*; When theſe Muſcles are contracted to their Originations, the ſecond and third Joynts of the Fingers, together with the help of the *Interoſſei* are primarily extended, and in time of need, may ſerve to aſſiſt in oblique Motions: and wiſe Nature placed theſe inwardly, that if by any miſchance the outward Tendons might receive any miſchief, or happen to be wounded, yet by the aſſiſtance of theſe, the Fingers might be extended.

These do extend the first Joynts of the Fingers.

Use.

This you have at *D.D. Tab. 20. Fig. 2. a.* Shews its beginning, *b.b.b.* Its diviſion into three Fleſhy parts.

The

The Explanation of the Three and twentieth Table.

FIG. I.

D Supinator Radii Longus *laid bare.*
a. Shewing its beginning.

b. b. Its Tendon.

E. Supinator Radii Brevis.

C. Shews its Origination.

D. Its Insertion.

H. Shews the Ligament which distinguishes the External Muscles from the Internal.

FIG. II.

C. Supinator Radii Longus.

D. Supinator Radii Brevis, c. Shews its Insertion.

H. Carpum Extendens Interior laid bare.

e. Shews its beginning, f. Its Tendon.

I. K. K. Carpum Extendens Exterior laid bare.

b. b. Shews its two Tendons.

The

Next

Fig. 1.

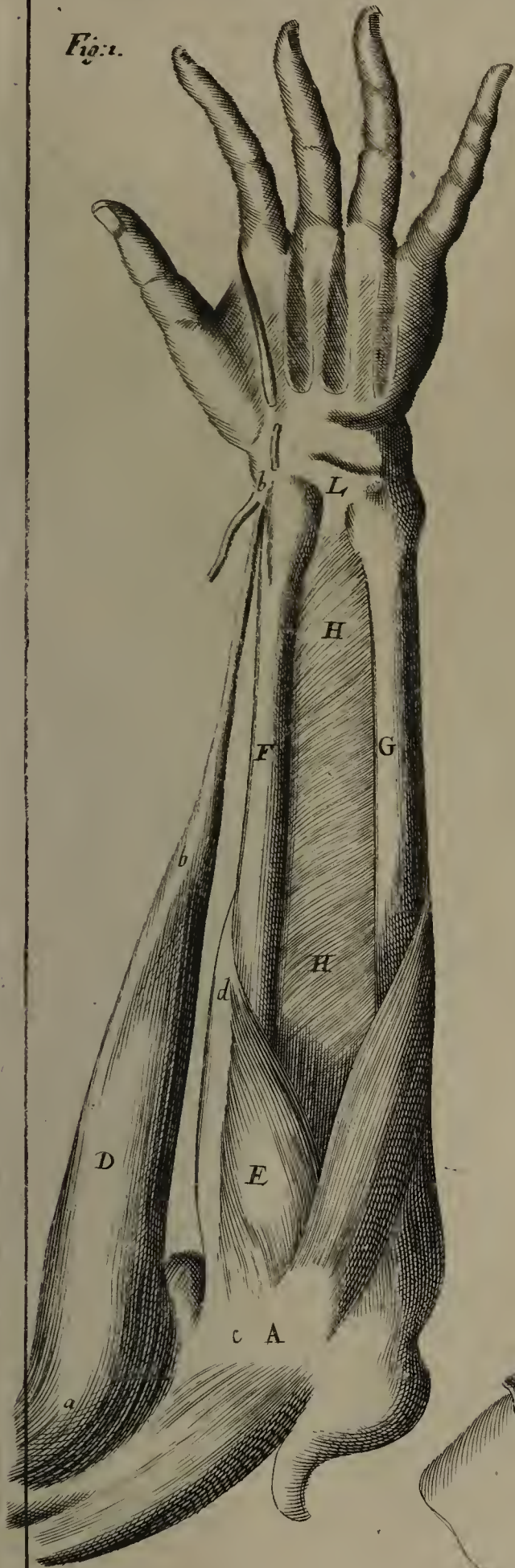
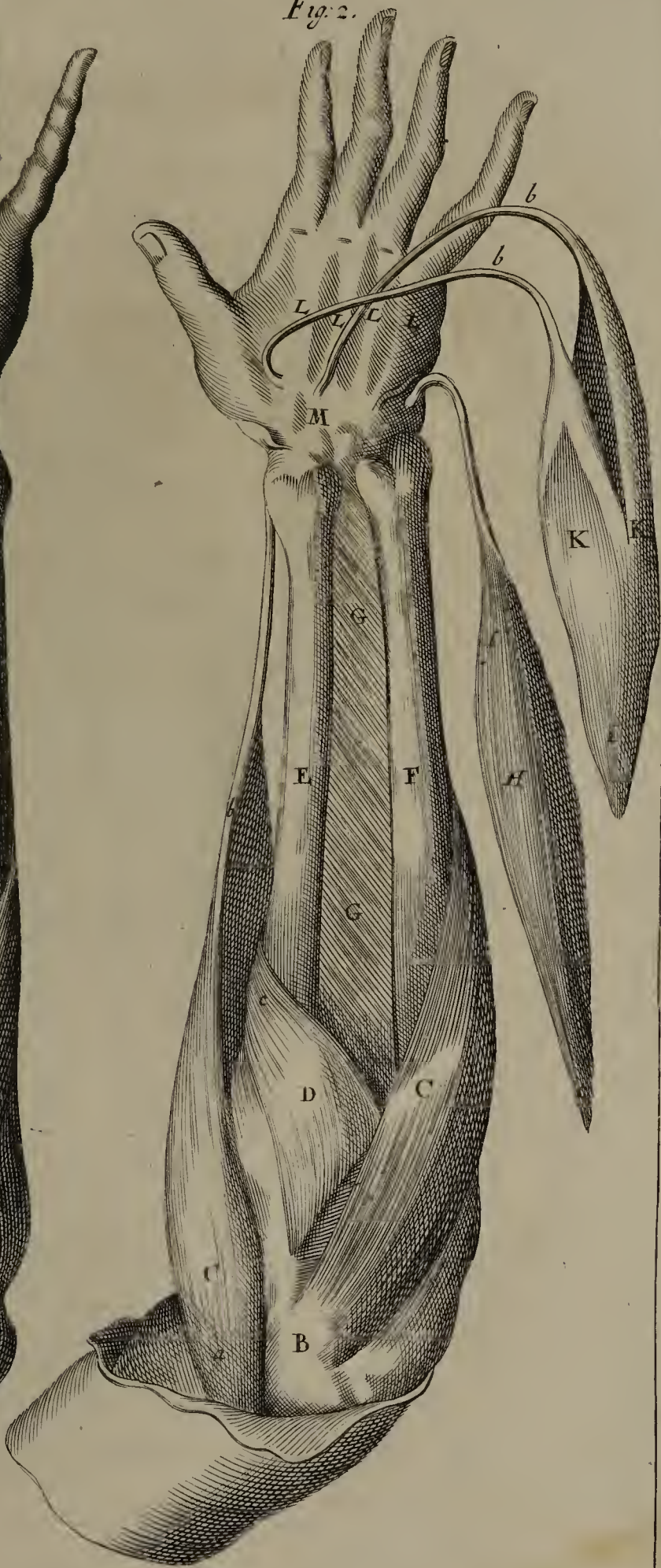
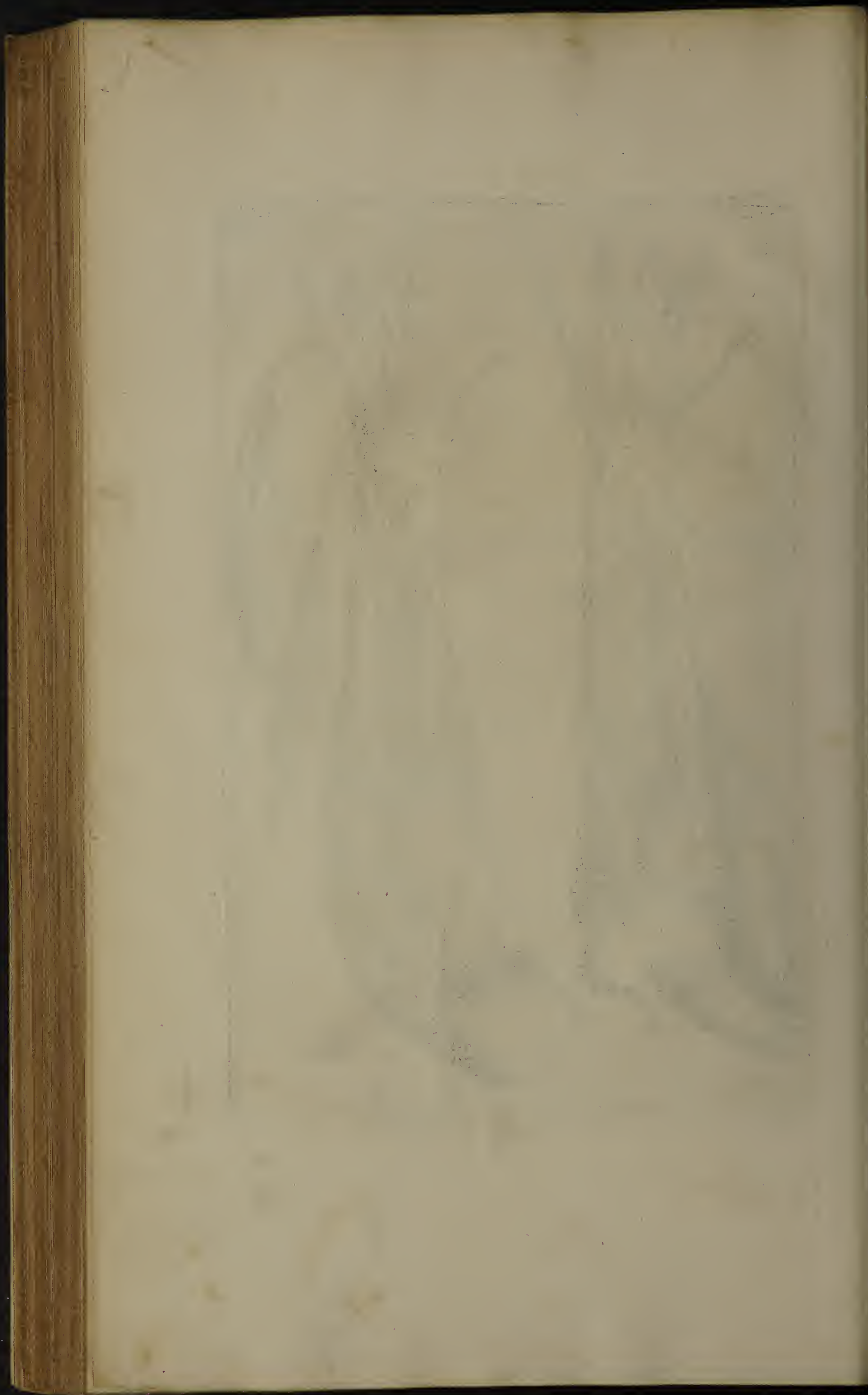


Fig. 2.





Next come we to the Body it self as it lies.

Serratus Major Posticus.

TO the former Muscles of the *Thorax* are also added these two, so called *Serrati postici* from their Actions, as ^{these do dilate the Thorax.} also from their Indentings : and *Postici* being contrary to those *Serrati* we have already described, and they are also called either *Superiores* or *Inferiores* from their places which they do possess.

This Muscle being small is inserted in the Back under *Rhomboides*, between either *Scapula*, and upon the first pair of the Muscles of the Head, arising very thin and Membranous ; from the Spinal processes of the three last Vertebres of the Neck, and the first of the *Thorax*, and in its oblique progress towards the Convex part of the *Thorax* it becomes Fleshy, and is inserted into the four upper Ribs, by so many distinct Terminations, and by drawing them upwards doth dilate the *Thorax*.

This you have at *Tab. 24. at C. in situ, d.d.* Shewing its beginning, *e.e.e.* Its end consisting of three sorts of Fibres, *D.* The same laid bare.

M m

Serratus

Serratus Posticus Inferior.

*This dilates
the lower
part of the
Thorax.*

THis Muscle is broad, thin, and Membranous, placed almost in the middle of the Back under *Latissimus*, and the *Anisclptor* of the Arm, arising from the Spines of the lower Vertebres of the Back, and the first of the Loyns, and marching along transversly becomes Flethy. and is inserted into the four lower Ribs by so many distinct Terminations, the which drawing outwards doth dilate the lower part of the *Thorax*.

Use.

E. Shews this at *Tab. 24. f. f.* Shews its Origination, *g. g. g.* Its Serrated Insertion; *F.* This Muscle laid bare.

Splenius

2211102

in M

Splenius five Triangularis.

THis ariseth double: First, from the Spines of the fourth, fifth, third, second, and first Vertebres of the *Thorax*: Secondly, from the Spines of the five lower Vertebres of the Neck, and so running broad and long about the third Vertebre of the Neck, both the Originations do unite: and by oblique Fibres both Muscles do insert themselves into the middle of the *Occiput*; You must take off from its Originations, and preserve as many of its *Ansulae* as you can between the Spines by running between, and recovering its Tendon; If both move, they draw the Head directly backwards, if only one move, it turns the Head laterally.

*It brings
the Head
backwards.*

Use.

This you have at *Tab. 24.* at *A. A.* *A. A.* Shews the same at *Tab. 26.* This you have at *B. B.* also *Tab. 25. Fig. 1.*

Trigemi

Trigeminus five Complexus.

*This extends
the Neck.*

THis is the second pair of the Extenders, lying under the former, and is called *Trigeminus*, because it has allowed it a threefold Origination, and seemeth to be conflated out of three Muscles running into one: it hath various beginnings, and obtains both many and Nervous parts; it ariseth threefold, first, from the fourth and fifth transverse Processes of the Vertebres of the *Thorax* and immediately becoming Flethy doth ascend over the rest of those Vertebres, until he reacheth the lowest Vertebre of the Neck, where it becomes a round Tendon; Not far from thence again it becomes Flethy, and inserts it self into the middle of the *Occiput*; The second Origination is by a short round Nerve from the same Process of the last Vertebre of the Neck, and thence becoming Flethy is joyned to the other before its Insertion; The third Origination is partly Flethy, and Nervous from the transverse Processes of the first and second Vertebres of the *Thorax*, and running obliquely outwards, after union with the former, is inserted into the Root of the Mammillary Process, bestowing an Ansula upon every transverse Process of the Neck. To find this fairly, divide the sides of *Spinatus*, and *Longissimus Dorsi*, and his Origination will more plainly appear.

obs.

Riolanus doth observe that the Fibres both of this *Complexus* and *Splenius* to be intersected and disposed cross-ways for the better strengthening of either Muscle.

B. B. Shews this at *Tab. 24.* *B. B.* Shews the same at *Tab. 26.* *C.* Shews the same laid bare at the same Table.

musculus

Transver-

 Transversalis.

THis ariseth from the transverse Processes of the six upper ^{This extends the Neck,} Vertebres of the *Thorax*, and so growing thicker, is implanted externally into all the transverse Processes of the Neck, and hence had it given it its name, and doth draw the Neck backwards: but one of these only working, ^{use.} they bend it obliquely downwards; between these are carried the Nerves of the Spinal Marrow, passing out of the Vertebres of the Neck.

This you have at *E. E. Fig. 2. Tab. 25.*

N n

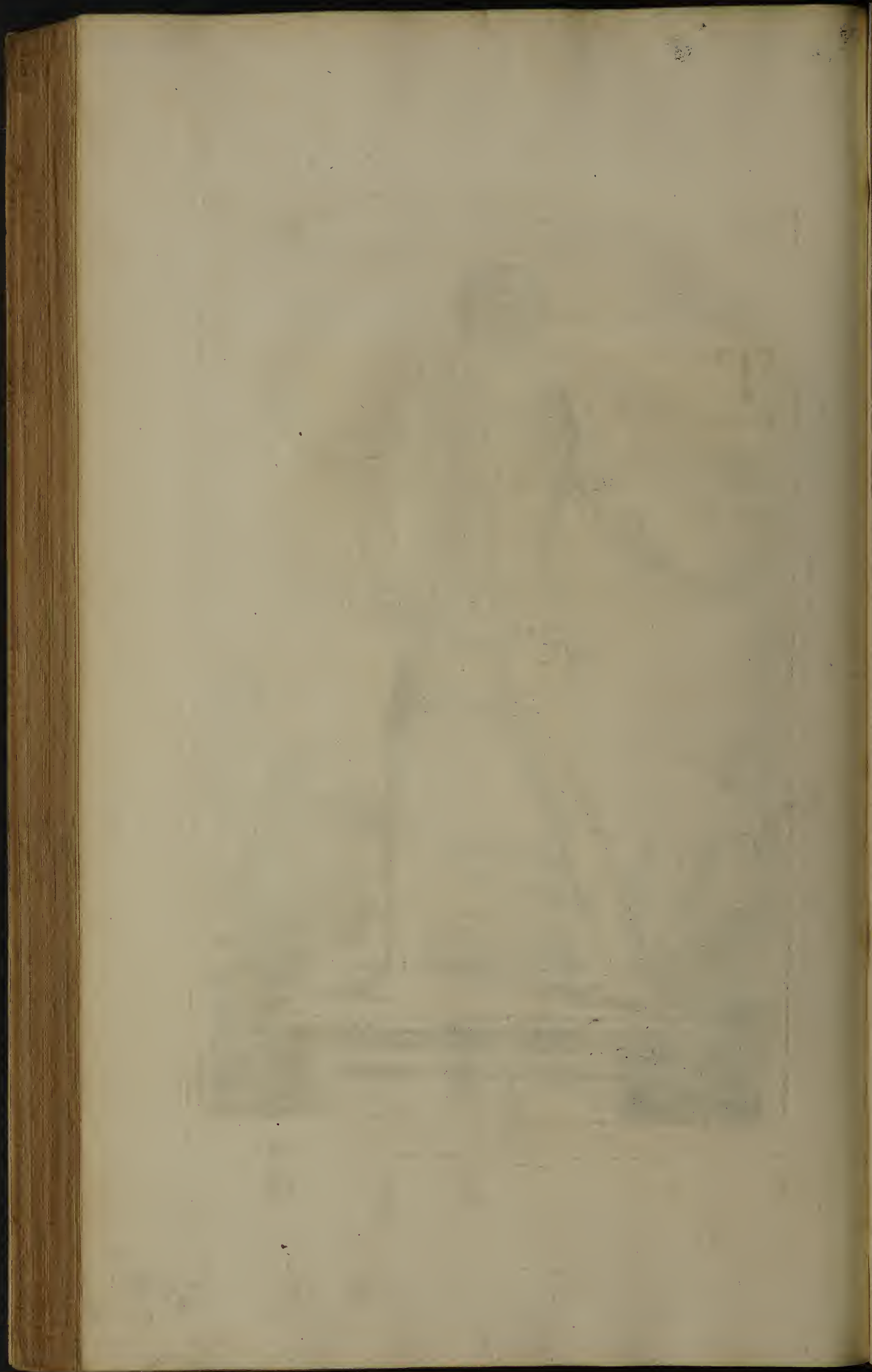
The

The Explanation of the Twenty fourth Table.

- | | |
|---|---|
| <p>A A. Triangulare by some
called Splenius.</p> <p>b. b. Shews its first and second
sides.</p> <p>B. B. Trigeminaus.</p> <p>C. Serratus Posticus Superior.</p> <p>d. d. Shews its Origination.</p> <p>e. e. e. Shews its Termination.</p> <p>D. Shews the same laid bare.</p> <p>E. Serratus Posticus Inferior.</p> <p>f. f. Shews its Origination.</p> | <p>g. g. g. Its Insertion.</p> <p>F. Shews the same Muscle laid
bare.</p> <p>G. Shews Rhomboides laid bare.</p> <p>h. h. Shews its Flefhy beginning.</p> <p>i. i. Its Flefhy Termination.</p> <p>H. H. Longissimus Dorfi.</p> <p>I. The same laid bare.</p> <p>K. K. Sacrolumbus.</p> <p>L. M. N. The same laid bare.</p> |
|---|---|
-

Spinati





Spinati Colli.

THis pair are long and large, possessing the whole Neck, This extends
as the former. between the Spines: it ariseth with many beginnings from the Roots of the Spines of the seven uppermost Vertebres of the *Thorax*, and ascending, gets a Tendon out of every transverse process of the Vertebres of the Neck, and is firmly implanted into the whole lower part of the second Spine of these Vertebres, and there the right and left do meet, and are so all the way united, that they are not divisible but by the Spine; These with the former do also extend the Neck, and use. then the Head, either directly, if they work together, or if they work singly or apart, it brings it obliquely.

F. f. f. These you shall have at *Fig. 2. Tab. 25.*

Recti

Recti Majores.

*These ex-
tends the
Head.*

THese are the fourth pair : this Muscle is small, thin, and Flefhy, arising from the points of the Spines of the second Vertebre of the Neck, and ascending, are inserted into the middle of the *Occiput*, and doth help the motion of the third pair.

These are generally held to be the fourth pair of the Neck, and are granted to give assistance to the former in their Ex-tensions.

This you have at *E. Fig. 1. Tab. 26.* At 25. you have them at *C. C.* At *b. b.* you have them, *id. Tab. Fig. 2.*

Recti

Recti Minores.

THese pair lying under the former, being of the same substance and shape, accompanied with the like ductus, These do help the former. do arise from a small protuberance of the first Vertebre of the Neck round, and ascending, are implanted as the former underneath them; by the benefit of these *Majores* and *Minores*, if the whole pair work together, it extends the Head directly, but if one only move, it is moved laterally. Use.

Nature hath made so many Muscles for extension of the Head, that Man might more aptly fit himself for the Contemplation of Cœlestial Bodies, and for this Motion, small Muscles were thought most requisite: and lest they might tire or grow weary in their long dependence, Providence hath ordered to these, long Muscles, more properly adapted for a longer bowing of the Head, or extending it to a sharper Angle. Obs.

These you have at *Fig. 1. Tab. 25. at D. D. Fig. 2. ejusd. Tab.* you have them at *b. b.*

O o

Obliqui

Obliqui Superiores.

*These do
turn the
Head about.*

THe sixth pair are planted under the *Recti* or the fore-mentioned, answering their form or shape, being but small, and arising from the outward side of the *Recti* at their implantations, and obliquely descending, are inserted into the process of the first Vertebre of the Neck: if both move, they nod, and directly backwards: if only one, it inclines the Head laterally.

These are called *Obliqui* from their *sit*e, and one pair are implanted above another, either of which do lie under the *Recti Extendentes*, whose substance and form they exactly do answer. *Baughin* will have these to arise in the *Occiput*, and to end in the lateral processes of the first Vertebre of the Neck.

These you have at *F. Fig. 1. Tab. 26.* At *Tab. 25.* you have the same at *E. E. Fig. 1. Fig. 2. ejusd. Tabul.* you have them at *e. e.*

Obliqui

Obliqui Inferiores.

THis lower pair ariseth longish, Flethy, and thin from the Spine of the second Vertebre of the Neck, and obliquely ascending, are inserted with the *Obliqui Superiores* into the transverse Process of the first Vertebre. This helps the form. r.

When these are contracted, they work it about the Spine circularly, whence it is, that the Head consisting upon the same, it is also moved circularly therewith to the sides; but because these two pair are very small, the two former pair of Extensors, they do help those in their Motion, as also those of the right, as we have already shewn. use.

These you have at *Tab. 25. Fig. 1. at F.* And at *d. d.* you have them at *Fig. 2. ejnsd. Tab.*

The

The Explanation of the Twenty fifth
Table.

FIG. I.

A Trigemini.
B. Splenius.
C. C. Recti Majores.
D. D. Recti Minores.
E. E. Obliqui Superiores.
F. F. Obliqui Inferiores.

FIG. II.

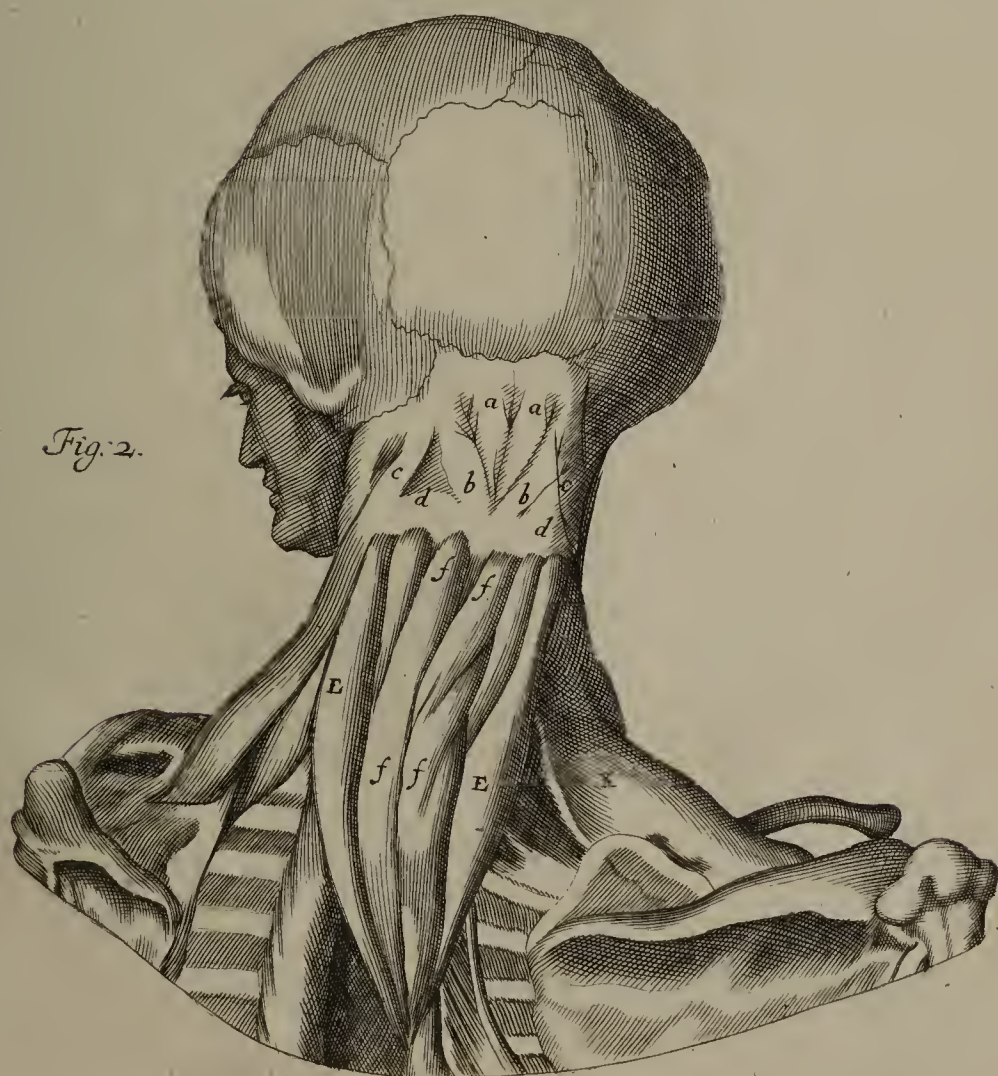
a. a. Recti Minores.
b. b. Recti Majores.
c. c. Obliqui Superiores.
d. d. Obliqui Inferiores.
E. E. Transversales Colli.
f. f. f. f. Spinati Colli.

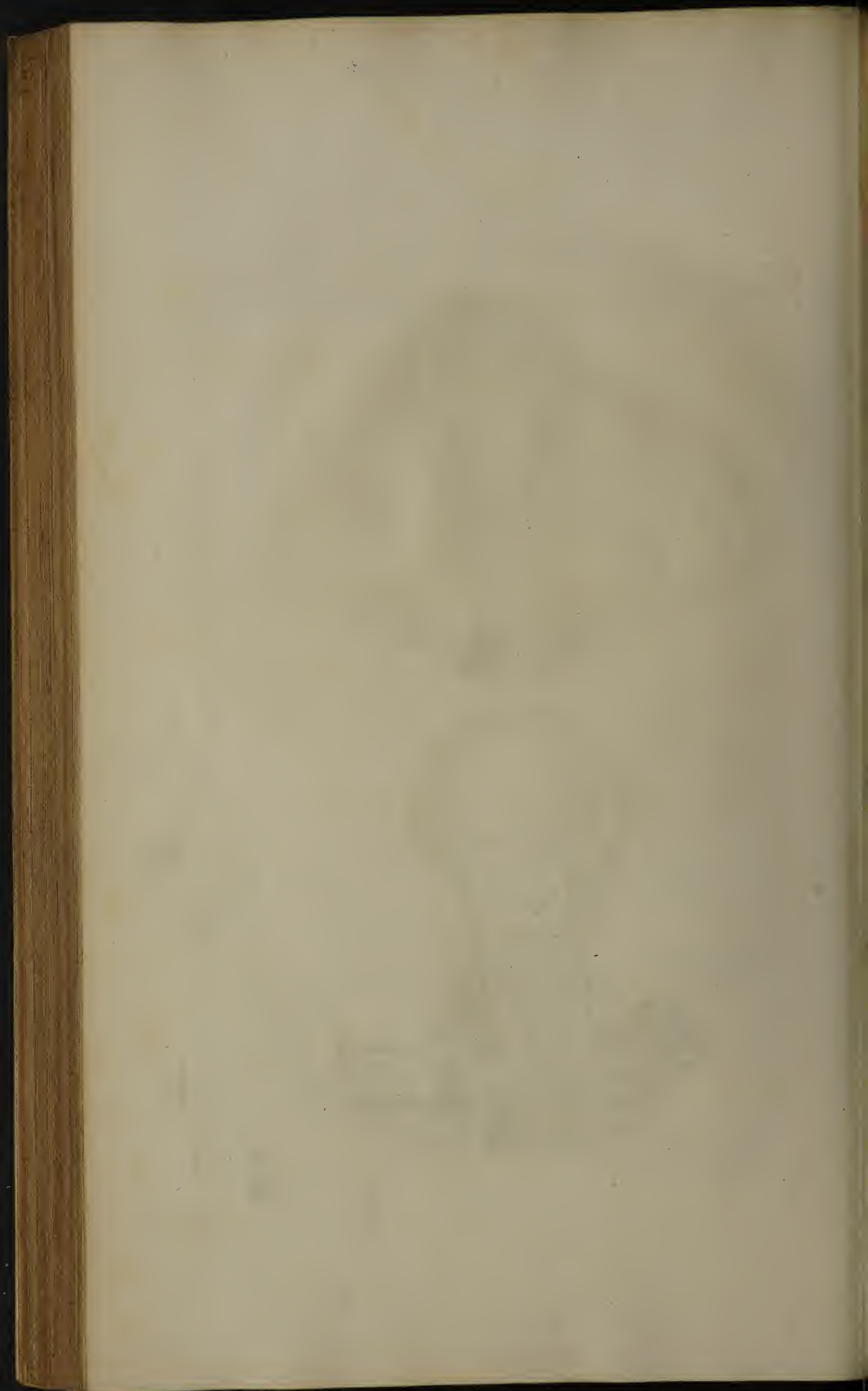
Longif.

Fig. 1.



Fig. 2.





Longissimus Dorfi.

THis Muscle hath not this name given it, only because it is planted between the Muscles of the Back, but being as the longest of the whole Body : for it ariseth from all the Spines of the *Os Sacrum*, and Vertebres of the Loins, as also from the inward part of the *Os Ileum*, where it joyns it self to the *Sacrum*, being the first and chief pair, its beginning being externally strong and Nervous, and somewhat Acute, but within Flethy, and so ascending, doth fix it self to the transverse Processes of the Loins, and becomes more Flethy ; then marching on, it narrows it self, and gives a small Nervous Tendon upon every transverse Process of the *Thorax*, except the twelfth, and doth insert it self into the said Process of the first Vertebre of the *Thorax*, although sometimes it attains the Mammillary Process.

*This extends
the Thorax.*

This is allowed to extend both the *Thorax*, the Loins, and their Vertebres : upon this borders the whole *Sacrolumbus* in its outside, whose beginning with this is one and the same, and is also continued from the end of the *Os Sacrum* to the twelfth Vertebre of the *Thorax*, and so continued in its whole progress through the Loins.

This you have at *H. H. Fig. 1. Tab. 24. I. I.* Shews the same laid bare in the Right side, *H. H. I.* You have the same at *Tab. 26. b. b.* The same laid bare.

P p

Sacro

Sacrolumbus.

*This helps
the form
in extending
the Thorax.*

THis Muscle lieth under *Serratus Posterior Inferior*, having the same Origination with *Longissimus Dorsi*, and doth adhere to him externally lateral, according to its length, until it hath got the twelfth Vertebre of the *Thorax*, where they seem to be two, although scarce divisible by dissection, and so growing thinner, doth insert it self by two small Tendons into every Rib of the *Thorax* at their Incurvation.

Use.

About these Tendons there doth arise a great dispute amongst Anatomists; for some with *Laurentius* do think this Muscle to send forth a double Tendon, one upwards to the lower parts of the Ribs, the other downwards to their upper part; and these Tendons thus diversly mediating (which are manifestly seen about the Ribs) are seen to attol the Ribs upwards in inspiration, and to draw them downwards in expiration; The truth is, these contrary actions are not to be reasonably conjectured to be acted by one certain Muscle: and that it may very well be allowed, that these descending Tendons ought to proceed from some other peculiar Muscle, here upon a diligent enquiry, we find them to proceed from a certain Muscle substrated to the *Sacrolumbus*, and to this it is so closely annexed, that it is scarce perfectly to be separated from it.

This you have at *K. K. Tab. 24. L. M. N.* The same laid bare.

Cervicalis

Cervicalis Descendens.

THis takes its Origination from the third, fourth, fifth, sixth, and seventh Vertebres of the Neck, and hence ^{Tend the Thorax.} by *Diemerbroeck* is Christened by the name of *Cervicalis Descendens*, thence arising Flethy, sending forth Tendons, somewhat downwards into the upper part of all the Ribs, directly opposite to those Tendons of the *Sacrolumbus*, and these Tendons thus intersecting themselves, do not work together but by turns; As the Tendons of the *Descendentis Cervicalis*, do draw the Ribs upwards in aspiration, so the *Sacrolumbal* Tendons in expiration do draw the Ribs downwards, so as they may be moved to, and contracted by them. ^{Expiration.}

As to this Muscle the Author will further satisfy you, and therefore I recommend you to *Diemerbroeck*.

Sacer.

Sacer.

*This extends
the Loyns.*

FOr the various Motions of the Back and Loyns, as forwards, backwards, and laterally, to every of the Vertebres are implanted Tendons of Muscles; Our Accurate Dissectors of late have found four pair of Muscles to be planted in the Back and Loyns, by whose help, the strong Motions of these parts are performed: some appointed for Contraction, others for Extension.

This pair are so called from their Origination, because they do arise from the Exterior part of the *Os Sacrum*, where they are joyned to the Spine, and so arising Flethy, have three several Tendinous Insertions: the first into the upper part of the transverse Processes of the Vertebres of the Loyns, the other into the Root of the same Processes, and the third into the Spine of the same Vertebre; To find this out, you must raise *Latissimus Dorsi*, and *Sacrolumbus* from their Membranous Originations; at *Os Ileon*, *Os Sacrum*, and from the Lumbal Spines, and immediately under this will this appear *in situ*, these helping forwards the action of *Longissimus Dorsi*.

This you have at L. M. N. at Tab. 26. L. M. Shewing its beginning, N. Its Termination.

Semispina

Semispinatus.

THis is the fourth pair, arising with a Nervous beginning <sup>This extends
the Thorax.</sup> from all the Spines of the *Os Sacrum*, and Loyns, and becoming Fleſhy, doth beſtow a Nervous Tendon upon every Spine of the Vertebres aſcending, and terminates acutely in the Spine of the firſt Vertebre of the *Thorax*, extending it.

This by *Spigelius* is accounted the ſecond pair of the Muſcles ^{uſe.} extending the *Thorax*.

This is ſhewn at *Tab. 26.* at *K. K. c. c.* Shewing its beginning, *d.* Its Termination.

Q q

Quad

Quadratus.

*This Muscle
extends the
Loyns.*

THis Muscle is called *Quadratus* from the resemblance it hath with a square : it ariseth from the back part, and upper Cavity of *Os Ileon*, as also from the upper part of *Os Sacrum*, broad, thick and Flethy, and so ascending over the Vertebres of the Loyns, doth adhere internally to their transverse Processes, and inserts it self being grown narrower, to the inner part of the twelfth Rib Flethy, and doth bend the Vertebres of the Loyns forwards : and one only working, it bends it obliquely forwards to the sides.

Use.

Use.

The Loyns are concerned with three Motions, the which are performed by two pair of Muscles, for they are bent forwards, extended backwards, and brought laterally, they are contracted by these two, and extended by *Sacer*.

This you have shewn at *R. R. Tab. 26.*

Psoas

Psoas vel Lumbaris.

Since Ambulation is the proper office and work of the Foot, and this being very consistent in Firmation and Motion, (for when one Foot remains on the Ground, the other is lifted up, and so moved forward for the compleating of Ambulation) now for the performance of either of these Functions, its very requisite these parts should be furnished with such Muscles as may make forwards towards these Extensions and Contractions, as also to the promoting of the various Motions of the Thigh, Leg, and Foot, these being according to our pleasures either extended, contracted, adduced, abducted, and wrought or brought about : amongst the Contractors we meet with this, as the first called *Lumbaris* or *four.*

It ariseth Livid and Fleshy from the sides of the Bodies of the two last Vertebres of the *Thorax*, and the three uppermost of the Loyns, and from their transverse Processes descending somewhat round from the inner part of the *Os Ileon* ; to the *Os Pubis*, where it becomes a strong and round Tendon, and running through its Sinues, is implanted into the upper part of the lesser *Rotator* : Its Use is to draw the Thigh upwards, and to bend it inwards ; and because the Kidneys do lie upon this Muscle, as *Laurentius* doth observe, over which is spread a notable Nerve, hence it happens, that such as are troubled with the Stone, do find a sleepiness in that side of the Thigh whereon the Stone is lodged, by its compression.

D D. Shews this at *Tab. 27. b. b.* Shews its Origination, *E.* Its Tendon, *F. F.* The Nerves which pass hence into the Thigh, *G. G. G.* The same laid bare.

The

The Explanation of the Twenty sixth Table.

A Splenius.	<i>bare.</i>
<i>a. a. a. Shews its Anfulæ.</i>	<i>b. b. Shews the same wholly laid</i>
B. B. Trigemini.	<i>bare.</i>
<i>C. The same laid bare.</i>	<i>a. a. a. Shews its inward Face and</i>
D. D. Transversales Colli.	<i>Anfulæ.</i>
E. Rectus Major.	K. K. Semispinatus.
F. Obliquus Superior.	L. M. N. Sacer.
G. Obliquus Inferior.	<i>L. L. Shews its Origination.</i>
H. H. I. Dorsi Longissimus <i>laid</i>	R. R. Lumbales Quadrati.

Pfoas

TAB. XXVI.





Psoas Parvus.

BEsides the former, in some Bodies is seen this *Psoas Parvus*, This doth help the former. so called by *Baubine*, it ariseth Flethy the length of a little Finger, and is dilated with a slender and plain Tendon above the *Psoas*, and ends with the *Psoas* and *Ileon*, and embraceth them very firmly; *Riolan.* affirms he never could find this in Women; *Bartholine* writes, that he saw this Muscle arising in a strong and Flethy Man at the *Hague*, whose beginning was Flethy, and did equal the breadth of three transverse Fingers; it was inserted Flethy in the upper Posterior Margent of the *Os Ilii*, at the Origination of the *Iliacus Internus*: he obs. supposed its Use to be as a Pillow to the former, and that whereas the *Os Ileon* of it self was immovable, or that it might sustain the *Os Ileon* erected, lest by the standing too much thereon, it might cause a weariness and prove burthensom. its Use.

Our Master of Anatomy, Mr. *William Molins* in the Year of his being Master doth mention this Muscle, in the Body then Dissected by him.

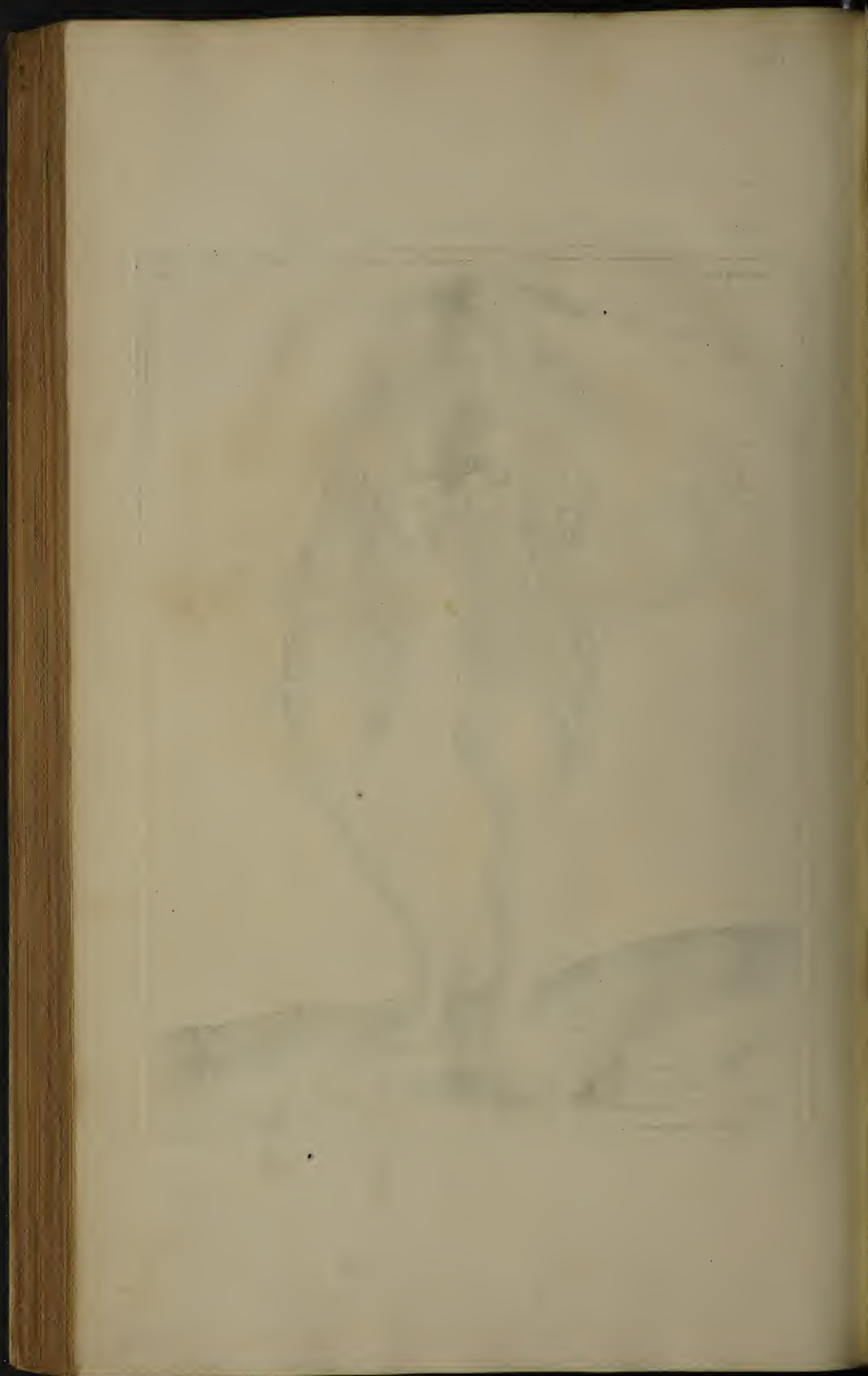
This Muscle lies under the former, but appears not very frequently.

The Explanation of the Twenty seventh Table.

A <i>A. Shews Quadrati.</i>	<i>I. I. I. Iliacus Internus.</i>
<i>D. D. Psoas or Lumbalis.</i>	<i>L. L. M. M. M. The same laid bare.</i>
<i>b. b. Shews its Origination.</i>	<i>O. Lividus.</i>
<i>E. Its Tendon.</i>	<i>P. The same laid bare.</i>
<i>G. G. G. The same laid somewhat</i>	<i>R. Rectus.</i>
<i>bare.</i>	<i>T. Fascialis.</i>

We





We arrive now to the taking the Thigh off from the Trunck of the Body, by dividing Os Ileon from the Os Sacrum, after which, will this appear as the most proper Order of Dissecting these following Muscles.

Iliacus Internus.

THis is the second Muscle of the Thigh, proceeding from the whole Spine of the *Os Ileon* semicircular broad, and internally Flethy, then narrowing, and growing thicker becomes Tendinous, and passing through the same Sinus with the *Psoas*, is implanted into the same *Rotator* a little below it. This is allowed to bend the Thigh directly, that is, when it is raised towards the Body, so as that it inclines to no one side, and when we make a right Angle with the Spine, then we properly say the Thigh is contracted, when sitting we sit with contracted Thighs. *This contracts the Thigh directly.*

This you have at 27. *Tab.* at *I. I. I. L. L.* The same laid bare *id. Tab. M. M. M.* Shews its Flethy beginning.

Glutæus

Glutæus Major.

*This extends
the Thigh
obliquely
backwards.*

THis is the first of the Extenders, the which with its other two doth make up the Fleſhy Maſs of the Buttocks, the Skin being laid bare, this ſhews its broad beginning, enated from diſverſe Bones: it ariſeth from the whole Spine of the *Os Ileon* externally, then from the lower part of the *Os Sacrum* laterally; And thirdly, from the *Os Coxendix* large, and Fleſhy, running obliquely down over the Juncture of the *Os Coxendix*; and growing narrower is implanted by a broad and ſtrong Tendon into the firſt Impreſſion of the great *Rotator*, and part of it alſo into the *Linea aſpera*.

uſe.

Then we properly do affirm the Thigh to be extended, when it's brought outwards, (*viz.*) as when we ſtand as it were with divaricate Thighs, or Thighs that are placed at a diſtance.

This you have at *Tab. 28.* at *C. C. C. a. a. a.* Shews its upper part, *b. b.* Its other part, *H. I. K.* The ſame laid bare. *H. H. H.* The thick and Fleſhy beginning of it, *i. i. i.* Its thick Belly, *K. K.* Its Tendinous Subſtance.

Pſoas

Glutæus Medius.

THis Muscle ariseth under the former, much like it both *in site* and magnitude, from the forepart of the Spine, ^{*This extends it obliquely forwards.*} as also from the back of *Os Ileon*, Flethy, broad, and semicircular, and obliquely descending, narrows it self, and doth enwrap the Juncture as the former, and is implanted by a broad, strong and Membranous Tendon transversly into the fourth impression of the great *Rotator*; This is said to extend the Thigh and draw it upwards, and laterally forwards, as some imagine, but I humbly conceive it assisteth the *Glutæus Major*, and depresseth the *Os Femoris*: and after it is lifted up by the *Psoas* and *Iliacus Internus*, this Muscle pulleth it down again, and is as an Auxiliary Muscle to the *Glutæus Major*, and *Minor*, in the extension of the Thigh. *use.*

L. L. Shews this Muscle *in situ* at *Tab. 28. e. e.* Shews its Flethy beginning, *B. B.* Shews the same *in situ*, *Tab. 29. D. e. f.* Shews it laid bare, *D. D. D.* Shews its Flethy beginning, *E.* Its Flethy Belly, *F.* Its Tendon.

S f

Glutæus

Glutæus Minor.

*This extends
the Thigh di-
rectly.*

THis lies wholly under the second, arising livid, broad, Semicircular and Fleshy, about the lower part of the back of the *Ileon* near the *Acetabulum* of the *Coxendix*, and so runs obliquely forwards Fibrous, according to the Ligament that binds in the head of the *Os Femoris*, and is implanted by a broad and strong Tendon into the third impression of the great *Rotator*.

Use.

These three do extend the Thigh, and do draw it backwards, and so extend it. I conceive it most probable, they all unite in pulling the *Os Femoris* downward and backward, after it is elevated by the *Flexors*, the *Psoas*, and *Iliacus Internus*.

This is shewn at *Tab. 29. at G. G. a. a.* Shews its beginning, This you have laid bare at *Tab. 29. at a. a. a. b. b.*

Iliacus

Iliacus Externus vel Pyriformis.

THis Circumagent Motion is performed when the Thigh This brings the Thigh about upwards. is Circumverted ; which thus happens : when standing with the Right Foot firm upon the Ground, we move the Thigh obliquely ; this Motion is twofold, for its either brought outwards or inwards : outwards when the Knee is moved outwards, and the Heel inwards : inwards when the Knee is brought to the Ham, and the Heel forwards ; Amongst these Circumagent Muscles this is reckoned the first

It ariseth thick and Fleshy from the three lower Vertebres of the *Os Sacrum*, and running transversely becomes a round Tendon, and is inserted into the fourth impression of the great *Rotator* ; This draws the Thigh upwards, outwards, and backwards, this is allowed the thickest Muscle in Human Body, and is stuffed out with wonderful variety of Fibres. use.

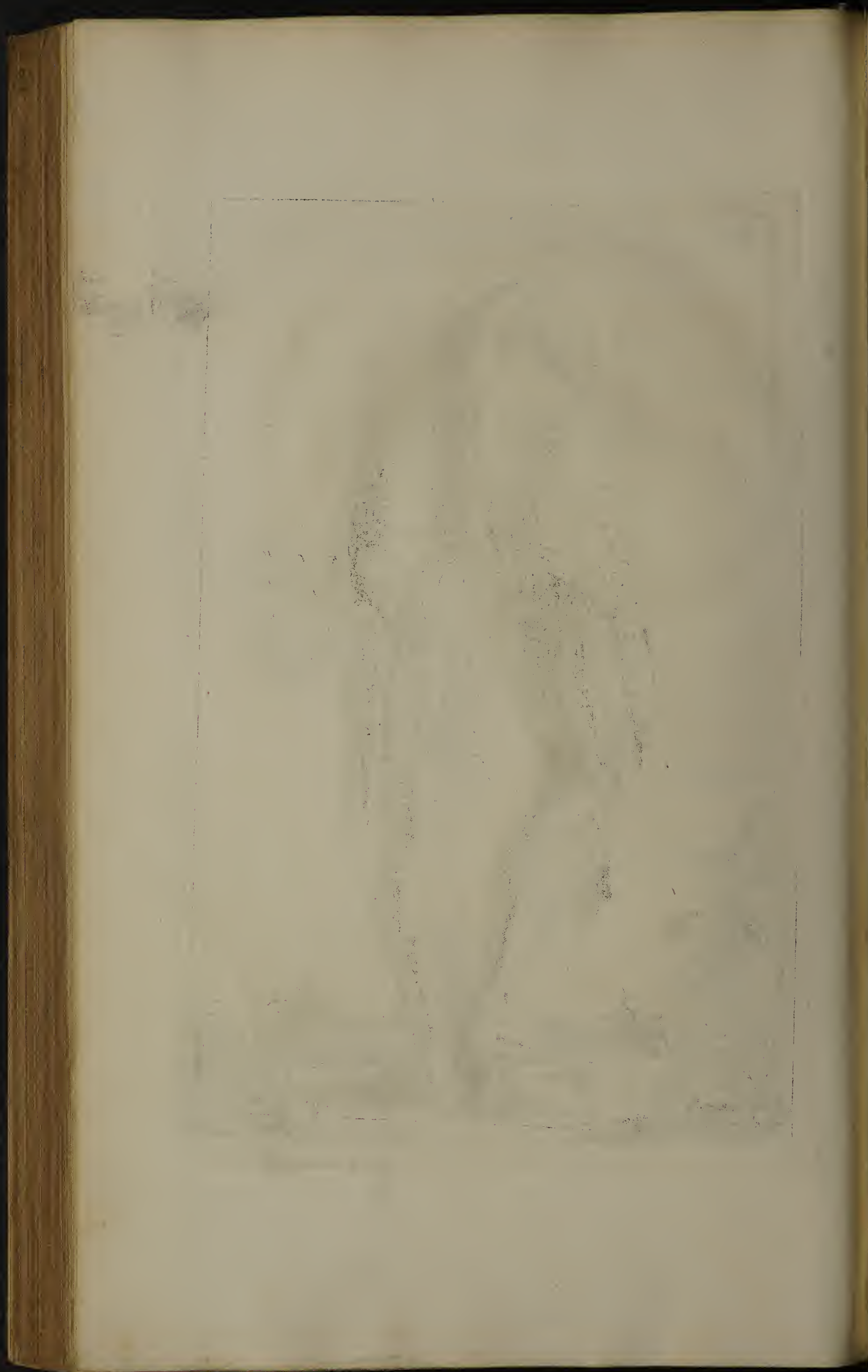
This is shewn at *Tab. 28.* at *M. f.* Shews its beginning, *g.* Its Tendon, *H. Tab. 29.* Shews the same *in situ*, *K.* Shews the same laid bare, *L.* Shews its beginning, *M.* Its long and slender Tendon, This you have laid bare at *Tab. 32.* at *L.*

The Explanation of the Twenty eighth
Table.

C C. C. Glutæus Magnus.	I. I. I. Its Venter.
a a. a. Shews the Cir- cumference of its Origination	K. K. Its Tendinous Substance.
H. 1 K. The same laid bare.	L. L. Glutæus Medius.
H. H. H. Shews its first and Fleshy Origination.	C. C. Shews its Fleshy beginning.
	M. Pyriformis.
	Q. Q. Marsupialis.

Obtura◄





Obturator Internus five Marfupialis.

THis ariseth Flefhy and large from the Membrane inter-
 nally that covers the great perforation of the *Os Pubis*,
 and covering the whole inward face of that Bone and
Coxendix, grows narrower, and fends forth three or four Tendons
 which are carried through the *Sinus* of the *Coxendix*, which is
 arched over, according to its length, with a ftrong Ligament,
 backwards to the outward part of the *Coxendix*, where they are
 received into a Flefhy Purfe, and fo making one Tendon, are
 implanted into the *Sinus* of the great *Rotator*, and doth make
 the outward Rotation; This Muscle muft be raifed inwards,
 and got through the *Sinus* under the Ligament, then its Purfe
 will plainly appear.

*This brings
 the Thigh
 round about
 outwards.*

This is shewn at *Tab. 28.* at *Q. Q. O.* Shews the same at *Tab. 29.*
 This you have also, *Tab. 29.* at *D. E. F. G. G.* Shews the same
 laid bare, *H.* Shews its Flefhy Purfe.

 Quadrigeminus.

*This brings
the Thigh
about back-
wards.*

THis ariseth Fleſhy from the riſing of the *Os Ileon*, and from the Appendix of the *Coxendix*, and runs broad, ſhort and Fleſhy towards the hinder part of the great *Rotator*, and is inſerted into that ſpace of the Bone which is between the two *Rotators*; the head of *Lividus* and part of *Triceps* muſt be thrown off, before the Origination of this will be cleared, or *Obturator Externus* found out.

This Muſcle by *Veſalius* is divided into two Muſcles.

obſ.

These Circumagent Muſcles do then bring the Thigh about, when ſtanding directly, and firm on the Earth we move the Thigh obliquely, and this Motion appears double, as outwards or inwards; that properly granted inwards, when the Knee is brought toward the *Poples*, and the Heel carried outwards: that outwards, when the Knee is carried outwards, and the Heel brought inwards.

This you have at *Tab. 30. at I.*

 Obtura

Obturator Externus.

THis hath its name from its Origination, it arising from the outward part of the Cavity, and is subjacent to the *Pectineus*, it arising large and Fleishy from the Membrane that enwrappeth the perforation of the *Os Pubis* externally, and so running transversly to the back part of the Thigh, becomes narrower, and is inserted by a strong Tendon into the *Sinus* of the great *Rotator*, and doth direct the inward Rotation. You must carefully bring your Knife inwardly about the edge of the perforation of the *Os Pubis*, and it will both arise and appear the better.

*This brings
the Thigh
about in-
wards.*

Use.

This (together with the *Internus*) fill up the Cavity which lies betwixt the *Os Pubis* and *Ischium*, whence it has its denomination.

This you have at *Tab. 32.* at *H. I. K.* Shews the same laid bare, *C. C.* Shews the same at *Tab. 30. S.* Shews the same at *Tab. 31.* This you have also at *Tab. 32.* at *H.* in its place, *I. K.* Shews it laid bare.

The

The Explanation of the Twenty ninth Table.

A A. A. A. Lividus.	M. Biceps.
C C. C. Obturator Exter- nus.	O. Seminervofus <i>laid bare</i> .
D D. E. Obturator Internus.	P. <i>Shews its Flefhy Origination.</i>
D D. <i>Shews its broad and Se- micircular head</i>	Q. <i>Its Nervous Termination.</i>
E E. The Tendons thereof.	R. Semimembranofus <i>laid bare</i> .
F F. The Marfupium or Purfe it self.	S. <i>Shews its Nervous head.</i>
G G. <i>Shews the fame laid bare</i>	V. Biceps <i>laid bare</i> .
H <i>Shews its Flefhy Purfe.</i>	X. <i>Shews its Origination.</i>
I Quadrigeminus.	Y. <i>Shews its Tendinous Infertion.</i>
K Seminervofus.	a. a. a. b. b. Glutæus Minimus <i>laid bare.</i>
L Semimembranofus.	c. Pyriformis <i>laid bare.</i>
	m. m. m. <i>Shews Triceps in fitu.</i>

Membra





Membranofus.

THe Leg hath three motions allowed it, it being either extended, contracted, or brought somewhat obliquely outwards, all the Extenders are implanted in the fore side of the Thigh, and these working together, do extend it aright; This Muscle by Anatomists is reckoned as the first of the Extenders.

*This extends
the Leg di-
rectly.*

It ariseth sharp, externally Nervous, inwardly Flethy, from the Spine of the *Os Ileon*, on that side next *Sartorius*, and then becomes broad, and Nervously Membranous, enwrapping all the Muscles of the Thigh within its self; then covering the Patella and two Focills in their outward part, is there implanted, and doth extend the Leg directly; and as some Authors will have, doth somewhat abduce it outwards.

Use.

As much as possibly may be, is to be kept of this Membrane in Dissection, and the division thereof to be made in the back part.

This you have at *Tab. 30.* at *M. M. O. O. O. M. M.* Shewing its beginning, *O. O.* Declaring its broad Tendon, *Q. R. S.* Shews the same laid bare.

U u

Sarto

Sartorius five Fascialis.

*This bends
the Leg.*

THis Muscle hath its name from its daily use which is made of it by Taylors, and Shoemakers, who when they be at their work, do generally sit Cross-leg'd, some call this *Fascialis* from *Fascia*, a Ligature or Swadling Band.

It ariseth sharp, Flethy and Nervous from the fore part of the Spine of the *Os Ileon*, and then becoming Flethy and broad, runneth obliquely internally over the Muscles of the Thigh, becoming Tendinous and broad at the inward Appendix of the *Os Femoris*; and is implanted by a broad Tendon, as some Authors affirm, and round, as others into the *Tibia*.

Use.

Riolan. writes, that this doth not bend the Leg, but rather doth bring it inwards, and so he supposeth doth more aptly extend it; This is one of the longest Muscles in Human Body.

This you have at *Tab. 30.* at *A. A. B.* Shews its Origination, *C.* Its Termination, *D. D.* Shews the same laid bare, *T.* Shews it also at *Tab 27.*

Gracilis.

Gracilis.

THis is generally accounted the second of the Contractors : *This doth assist the former.*
 it ariseth large and Nervous from the middle of the *Os Pubis*, according to the length of its Cartilage, and so descending inwards towards the Ham Flethy, doth there become a round Tendon, at the inner head of the *Os Femoris*, inserting it self into the *Tibia* near the former.

The first and second of the Flexors are planted in the fore part of the Thigh, the one outwards, the other inwards, the rest in the back part thereof ; if they be all contracted together, they do bend the Leg directly, but the first four only working, they do bring it somewhat inwards, whilst the other endeavours to carry it outwards, and by this motion, the end of the Foot in which the Toes are implanted is somewhat brought outwards. *obs.*

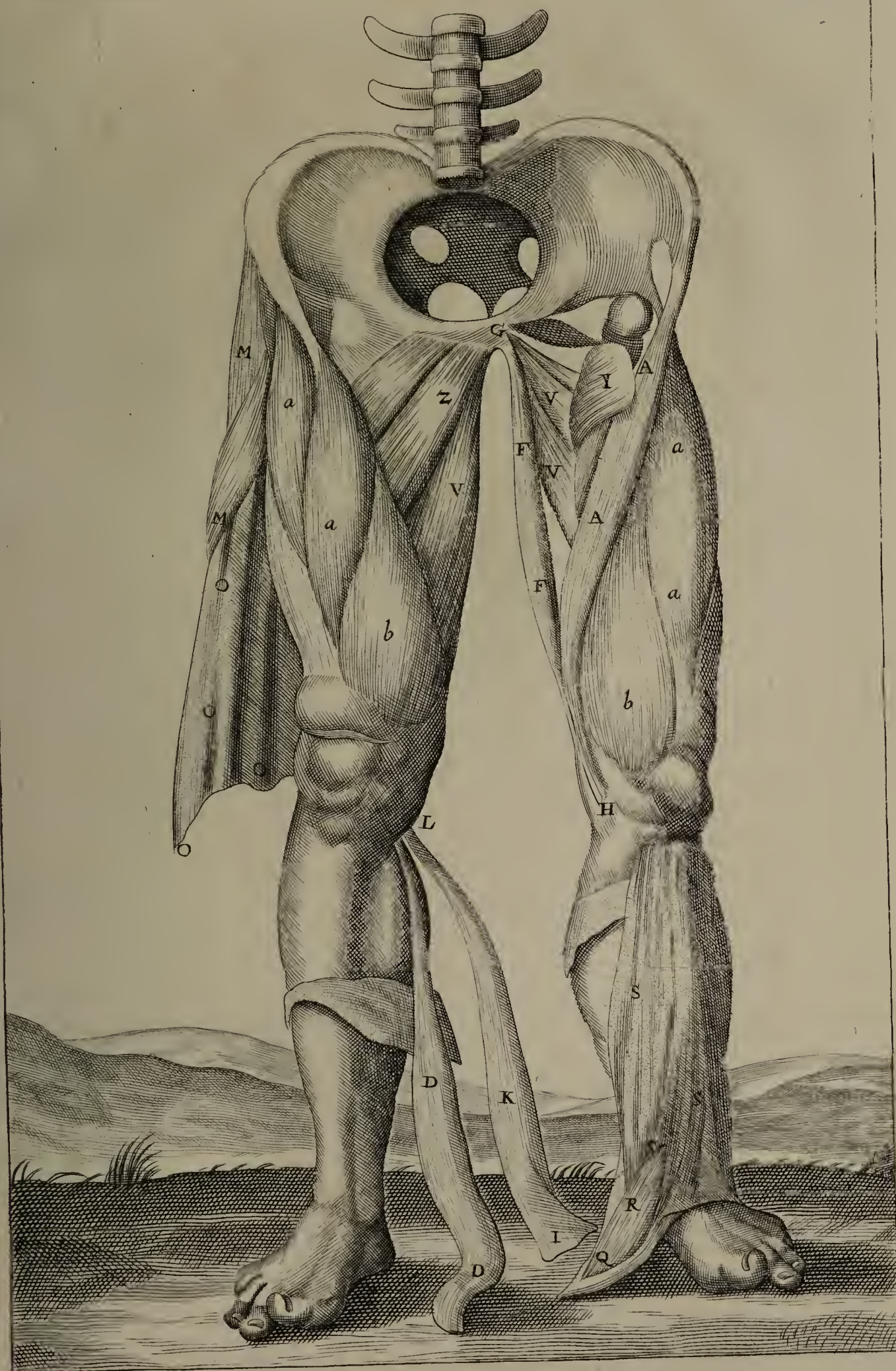
This is shewn at *F. F.* in its place, *Tab. 30. G.* Shews its Commissure, *H.* Shews its Insertion, *I. K. L.* Shews the same laid bare, *I.* Shewing its Nervous beginning, *K.* Its round Belly, and *L.* Its round Tendon.

The

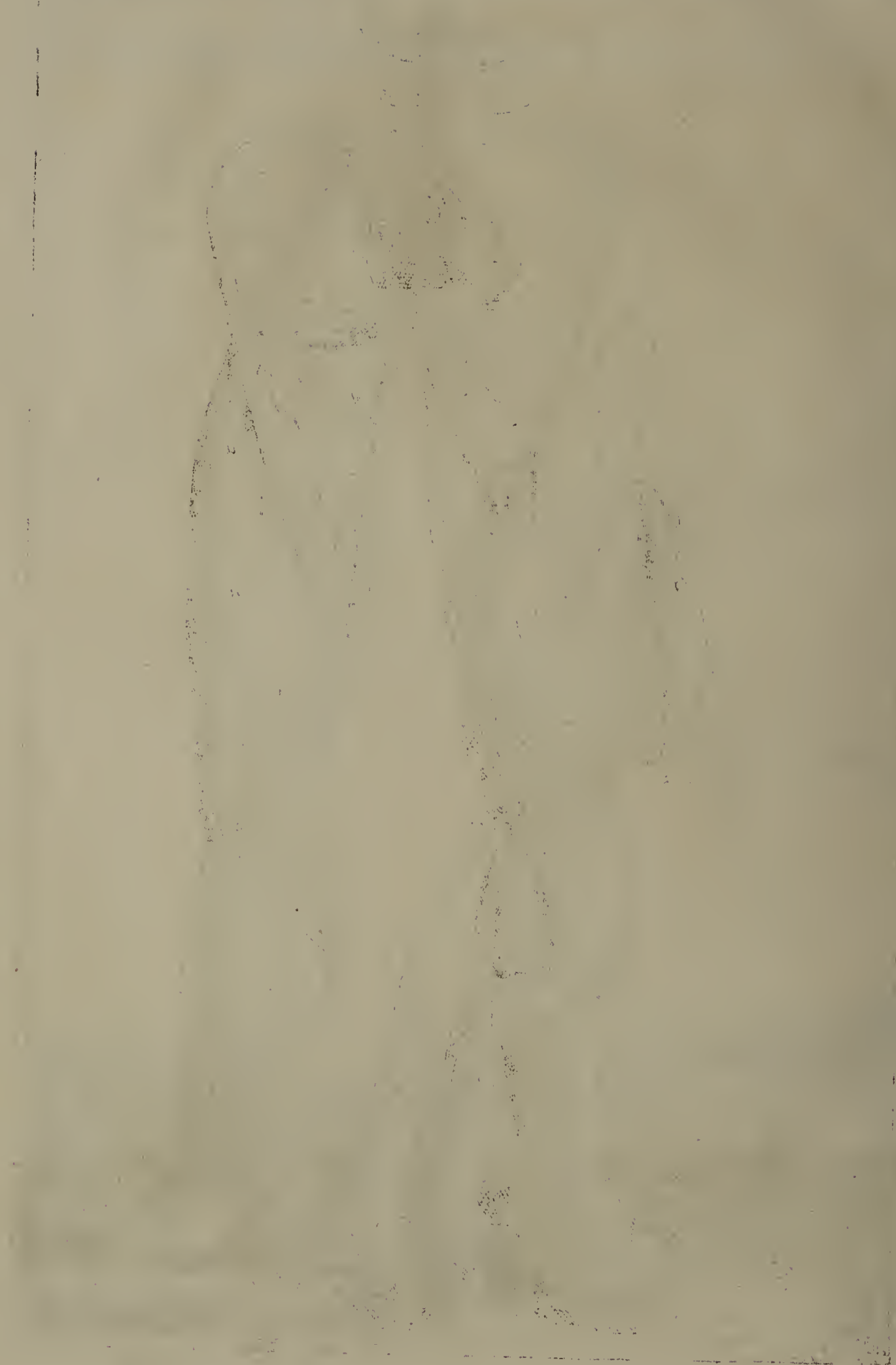
The Explanation of the Thirtieth Table.

A <i>A. Fascialis or Sartorius.</i>	<i>bare.</i>
<i>D. D. Shew the same laid</i>	<i>V. V. Triceps in either side.</i>
<i>bare.</i>	<i>X. Obturator Externus.</i>
<i>F. F. Gracilis.</i>	<i>Y. Lividus.</i>
<i>I. K. L. The same laid bare.</i>	<i>Z. The same laid bare.</i>
<i>M. M. O. O. Membranofus.</i>	<i>a. a. Rectus in situ.</i>
<i>Q. R. S. The same Muscle laid</i>	<i>b. b. Vastus Internus in situ.</i>

Rectus.



XXV 87



Rectus.

THis hath its name from its right Progress, and hath the ^{This extends the Leg.} Figure of a true Muscle, and is held as the third of the Extenders: it ariseth sharp and Nervous from the small inner Extuberance of the *Os Ileon*, and then becoming Flethy and round, when it arrives at the *Patella* it expands it self into a strong broad Tendon, entirely covering it, and running downwards, is inserted into the outward part of the *Tibia*, at a prominency provided for it.

This you have at *A. A. Tab. 31.* *B.* Shews the inward protuberance of the *Os Ileon* whence it ariseth, *C.* Shews its Tendon, *D. E. F.* The same laid bare, *D.* Shews its sharp and Nervous beginning, *E.* Its Flethy Venter, *F.* Its strong Tendon; This you have also at *Tab. 30.* at *a. a. a. a.* *R.* Shews this also at *Tab. 27.*

X x

Vastus

Vastus Externus.

*This also
doth extend
the Leg.*

THis from its great Mass of Flesh, hath its name given it, and is the third of the Extenders, arising broad and Nervous from the Root of the great *Rotator*, cleaving to the upper and outward part of the *Os Femoris*, and so descending Fleshy to the *Patella*, it becomes a Membranous broad Tendon, and mixing with the Tendon of the *Rectus* makes the same covering for the *Patella*, carrying the same insertion with it.

This you have at *G. G. G. G.* in its place at *Tab. 31.* *H.* Shews the beginning of this Muscle, *I.* Its Tendinous Membrane.

Vastus

Vastus Internus.

THis is the fourth extending Muscle, arising Nervous ^{This works as the former.} from part of the lesser *Rotator*; and from the neck of the *Os Femoris*, and growing Flethy, adheres to the Anterior, and Interior part of the said *Os Femoris*, and recovering the *Patella*, mixeth it self with the two former, covering the *Patella*, and taketh its insertion in the same place as they do.

This you have at *L. L. L. Tab. 31.* This you have also in its place at *Tab. 30. at v. v.*

Biceps.

Biceps.

*This doth
contract the
Leg.*

THis is the fifth inflecting Muscle, arising sharp and Nervous from the Appendix of the *Coxendix*, and growing Flethy, runs down externally; and being got half way, it attenuates and grows Nervous, as tending to a Tendon, where it joyns it self with its other head which ariseth from the *Os Femoris*, where *Glutæus Major* hath its insertion, and so growing thicker, outwardly Nervous, becomes a strong Tendon, and runs through the outward *Sinus* of the outward part of the head of the *Os Femoris*, and fixeth it self firmly to the outward side of the upper Appendix of the *Fibula*; *obs.* Sometimes this Muscle is distinguished with a double beginning and ending, so observed by *Vesalius*, and therefore by him this is called *Duplex*.

us.

This Muscle doth bend the Leg and pull it backward.

This you have laid bare at *Tab. 32.* at *O. O.* At *Tab. 29.* you have it at *M. V.* Shews this laid bare at *Tab. 29. X.* Shews its beginning, *Y.* Shews its Tendinous Substance, *Z.* Its Flethy Mole or Substance.

Semimembranosus.

THis is accounted the fourth of the Inflectors, arising ^{This bends the Leg.} where the former did, with a small Membranous beginning, and running downwards by the back part of the Thigh, doth continue Membranous half its progress; and then becoming Flethy and thick, inserteth it self by a round Tendon into the Ham, in the inner side of the *tibia*; The first of the four Inflectors being tied into the inner side of the *Tibia*, and the fifth into the *Fibula*; the first makes the inward hardness in the Ham, the other, the outward.

This you have at *Tab. 29.* at *L.* You have the same laid bare at *R.* *S.* Shews its Nervous Head, *T.* Its broad Tendon.

Y y

The

The Explanation of the One and thirtieth
Table.

A <i>A. Rectus.</i>	<i>G. G. G. G. Vastus Externus.</i>
<i>D. E. F. The same laid bare.</i>	<i>H. Its beginning.</i>
<i>D. Shewing its sharp and Nervous Ori. ination.</i>	<i>I. Its Membranous Tendon.</i>
<i>E. Its Flefhy Venter.</i>	<i>L. L. L. Vastus Internus.</i>
<i>F. Its strong Tendon.</i>	<i>Q. Q. Q. Q. Triceps in either side.</i>
	<i>S. S. Obturator Externus.</i>

Seminer





Seminervofus.

THis hath its name from its Substance, it being partly ^{This works as the former.} Nervous, and partly Flefhy, and is the third pair : it arifeth small and Nervous from the fame Appendix as the former, and fo continuing half way in its defcent, it then becomes Flefhy, running by the back part of *Os Femoris*, to the Ham, near which it becomes a round Tendon, and reflecting it felf, is inferted into the forepart of the *Tibia*.

This Tendon hath allowed it this worth observation, that it reacherh even to the middle of the length of the *Tibia*, with the reft of the Tendons implanted to the *Tibia*, the which do fcarfe defcend fo far. off.

This you have at *Tab. 29.* at *K. O.* Shews the fame laid bare, *P. P.* Shews its Nervous beginning, *Q.* Its Nervous Tendon.

Triceps.

Triceps.

*This brings
the Thigh
inward.*

THis is the largest of all the Muscles of the Thigh, yea, I may say, of the whole Body; its apparently seen to have three heads, all which do conclude in one end: It ariseth with three heads, the first Flethy and Nervous from the Appendix of the *Coxendix*, the which swelling, doth dilate it self into the hinder part of the Thigh, and then growing small, doth end in a round Tendon, at the inner head of the said *Os Femoris*; The second ariseth Flethy from the *Coxendix* at its conjunction with the *Pubis*, and terminates at the Root of the lesser *Rotator*, and in the upper part of the *Aspera Linea*; The third ariseth Flethy from the lower part of the *Os Coxendix*, and is implanted into the *Linea Aspera* of the said *Os Femoris*; To which some add a fourth, (*viz.* the following call'd *Pectineus*) which seems to be a part of this.

Use.

This is a Riding Muscle, drawing the Thigh inward, and fixeth the Rider to his Seat, keeping him firm in the Saddle, and may be truly stiled *Musculus Pudicitiae*, as assisted by the *Lividus* in keeping the Legs close.

This you have at *Tab. 31.* at *Q. Q. Q. Q. A. A. A. A.* Shews it in *Tab. 32.* *B.* Shews its beginning, *D. D. D.* Shews the same laid bare, *E.* Shews its beginning, *F. G.* The division of its Tendon.

Lividus

Lividus five Pectinalis.

THis is allowed the fourth of the Inflectors, it ariseth <sup>This bends
the Thigh
obliquely in-
ward.</sup> broad and Flethy from the forepart of the *Os Pubis*, near its Cartilage, obliquely descending; and is inserted by a large and short Tendon to the inside of the *Os Femoris*, near its middle, so as it strongly brings the Thigh upwards and inwards.

By *Bartholine* this Muscle is reckoned amongst the Adducient Muscles.

This Muscle is assistent to the *Triceps*, being an Adductor of the Thigh, which it pulleth inward, being very useful in Riding; keepeth a Horseman close to the Saddle; and (as was before said) seems to be a part of the *Triceps*, though it does not so closely adhere to it, but it may be separated without difficulty. use.

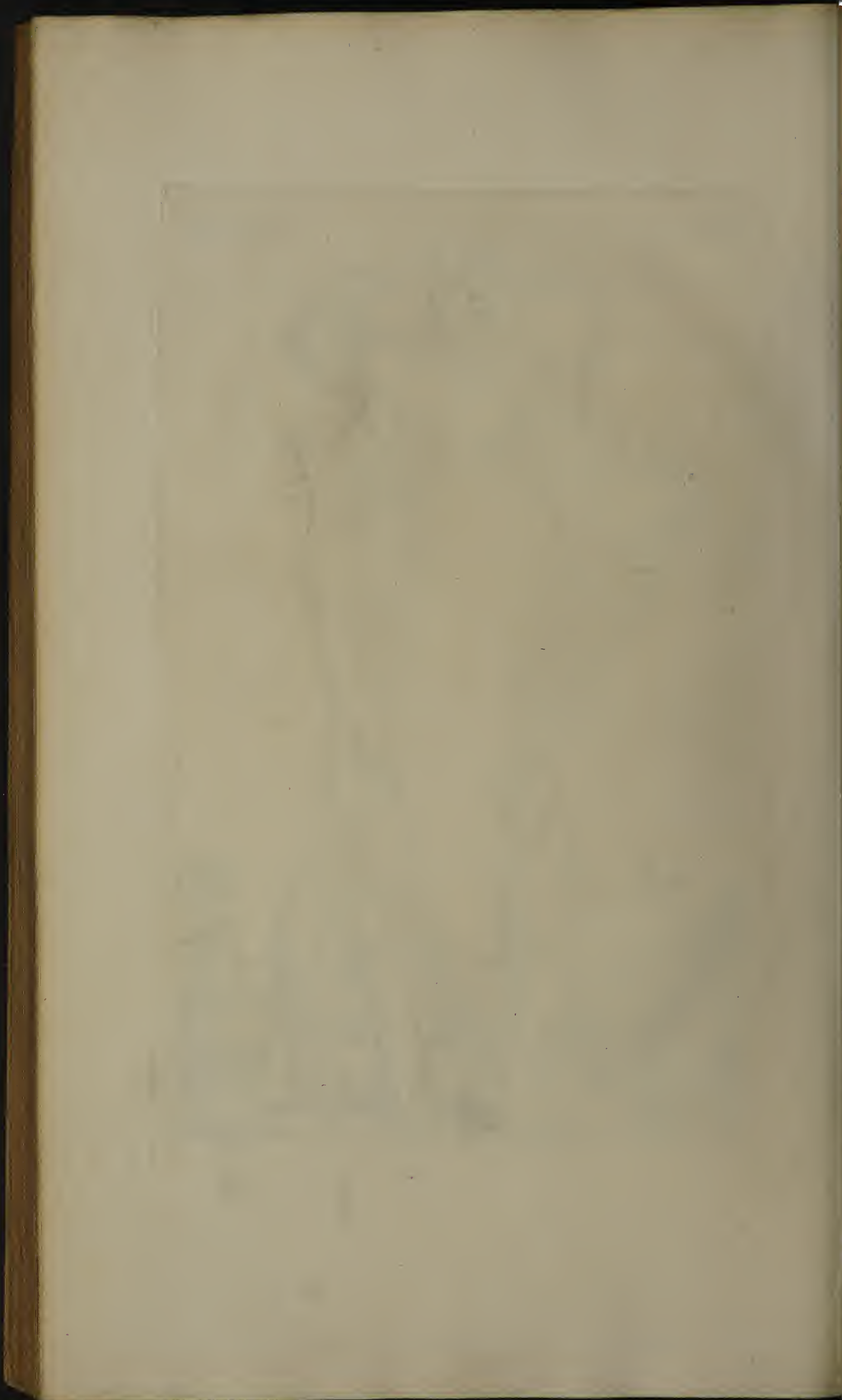
This you have at *Tab. 29.* at *A. A. A. A. B.* Shews the forepart of the *Os Pubis*, from whence this Muscle takes its Origination, *O.* Shews the same at *Tab. 27.*

The Explanation of the Two and thirtieth Table.

A A A A. Triceps
B Shews its Origination.
D. D. D. The same Muscle laid bare.
H. Obturator Externus.
I. The same laid bare.
K. Shews its Tendon.
L Pyriformis laid bare.
O O. Biceps laid bare.

Gaster





Gasterocnemius five Gemellus Externus.

THe Foot hath allowed its threefold motion, (*viz.*) Ex-^{This extends the Foot.} tension, Contraction, and lateral Motion; this is accounted the first of the Extenders, which maketh the Calf of the Leg: it ariseth broad and Flethy from the inner head of *Os Femoris*, as also from the outward head of the same Bones; so descending according to their Originations, they are united about midway, and are converted into one entire, broad, strong, and Nervous Tendon, and becometh one with the Tendon of *Gasterocnemius Internus*, and doth insert it self into the back part of *Os Calcis*, so that indeed they are but one Muscle with a double Origination.

Vesalius doth assert that the Sesamoidal Bones are Tributary to the two heads of this Muscle, not far from their Origination.

This you have at *Tab. 33. at D. E. F. G. H. Fig. 1.* *D.* Shews its first Origination, *E.* Another of its beginnings, *F.* Its Coherence, *G. G.* Shews its large Flethy Belly, *H.* Shews its large Tendon, at *Fig. 2. ejusd. Tab. O. P. Q. S.* Shews the same laid bare.

Plantaris.

This moves
the Skin of
the Sole of
the Foot.

AS that Muscle Is called *Palmaris*, which with its long and round Tendon doth march through the whole Interior part of the *Cubite*, and from thence to the Annular Ligament of the *Carpus*, and is afterwards expanded into a broad Tendon covering the whole Palm of the Hand ; so also is this *Plantaris* expanded through the whole hinder part of the *Tibia*, with a long and round Tendon, and at length marcheth into the Sole of the Foot.

It ariseth Fleshy, round, and slender under the former, from the outward lower head of *Os Femoris*, and after some Dilatation, it becomes a slender round Tendon, and running obliquely from the outward between both the *Gasterocnemii* inwards, and being joyned with their Tendons near the Heel laterally, running forwards, doth insert it self (after Dilatation over the Sole of the Foot) into each of the five Toes at the first Joynt.

Note.

The Dilatation of this Muscle over the Sole of the Foot, as also its Insertions, will not be found, unless you allow it to insert it self into *Flexor Primi Internodii* at its Origination in the Cavity of the *Os Calcis*.

Use.

This Muscle is of as great service to the Foot as *Palmaris* is to the Hand ; and serves to the Extention, or Expansive Motion of the Foot.

This you have at *Tab. 3. Fig. 2.* at *I. K. K. I.* Shewing its head, *K. K. K.* Its round Tendon.

Gaster

Gasterocnemius Internus, seu Soleus.

THis ariseth livid, strong, and Nervous from the Poste-^{This extends the Anale.}riour Appendix of the *Fibula*, and growing larger, adheres both to that and *Tibia*, and descending at half way, it becomes narrower and Tendinous, making one with the *Gasterocnemius Externus* both in Origination and Insertion; These three Muscles are united about their ends, and do frame one very strong Tendon, implanted in the back part of the Heel, the which by reason of its greatness, and singular strength above the Tendons of other Muscles; obtains the name of *Chorda Magna*, the which being Bruised or Wounded, (as *Hipp.* writes) proves Mortal or very dangerous: its by this Tendon at this very day that our Butchers do daily hang up their Oxen by; And that which is worthy observation as touching this, is, ^{obs.} that if any Inflammation doth arise about this part, it brings the whole Body miserably into consent therewith.

This you have at *L. M. N. Fig. 2. Tab. 33.* *L.* Shewing its strong and Nervous head, *M.* Its large venter; *N.* Declaring its Tendon.

Suppopliteus.

*This moves
the Leg ob-
liquely.*

THis ariseth broad and Nervous from the outward head of *Os Femoris*, and growing Flethy, runs obliquely to the back and inward part of the upper Appendix of the *Tibia*, and is there implantéd.

Use: *Riolan* saith, he sometimes hath found this double ; This moves the Leg obliquely outwards, and turns the Foot somewhat inward towards the other.

This you have at *G. H. Tab. 33. Fig. 2. G.* Shewing its beginning, *H.* Its Termination.

Flexor

Flexor Digitorum Tertii Internodii, seu Perforans, sive Sublimis.

THis ariseth Flešhy, and long from the back part of the *Tibia*, running, and adhering according to its length, to the middle of it, and there becoming a Tendon, is carried to the Internal *Matleolus*, where it becomes round, and is carried under the Ligament that proceeds from the lower Appendix of the *Tibia*, to the *Os Calcis*, and then divides it self into four Tendons, which terminates at the third Joynt of the four lesser Toes.

The Toes of the Feet are both contracted, extended, and moved laterally; And for these three Motions, Nature hath designed three kind of Muscles, and these are called either Flexors, Extensors, or Oblique Movers; four of these are implanted in the Leg; as this first, the Flexor of the Great Toe, and the Extensor of the third Joynt of the Toe, and the *Extensor Pollicis*; the other in the Foot.

L. L. L. L. Shews the four Tendons of this Muscle at *Tab. 37. Fig. 2.* *B.* Shews the Tendon of this Muscle, *Tab. 37. Fig. 2.* *D. D. D.* Shews its Flešhy part, *E. E. E. E.* Shews its four Tendons, *F. F. F. F.* Shews these also and their Originations at *Tab. 37. Fig. 2.* *H.* Shews this also at *Tab. 34. Fig. 1.* *I.* Shews its middle part, *K.* Its Exquisite Tendon, *D. D. E.* Shews the same, *Fig. 2. id. Tab.*

The Explanation of the Three and thirtieth Table.

FIG. I.

D E. F. G. H. I. Gasterocnemius Externus.
D. Shews its first Origination.
E. A second of its Originations.
F. Its Coition or Connexion.
G. G. Its large Flefhy Belly.
K. Its Tendinous Infertion.

FIG. II.

G. H. Suppopleus.

G. Shews its Origination.

H. Its Termination.

I. K. K. Plantaris.

I. Shews its head.

K. K. K. Its Tendon.

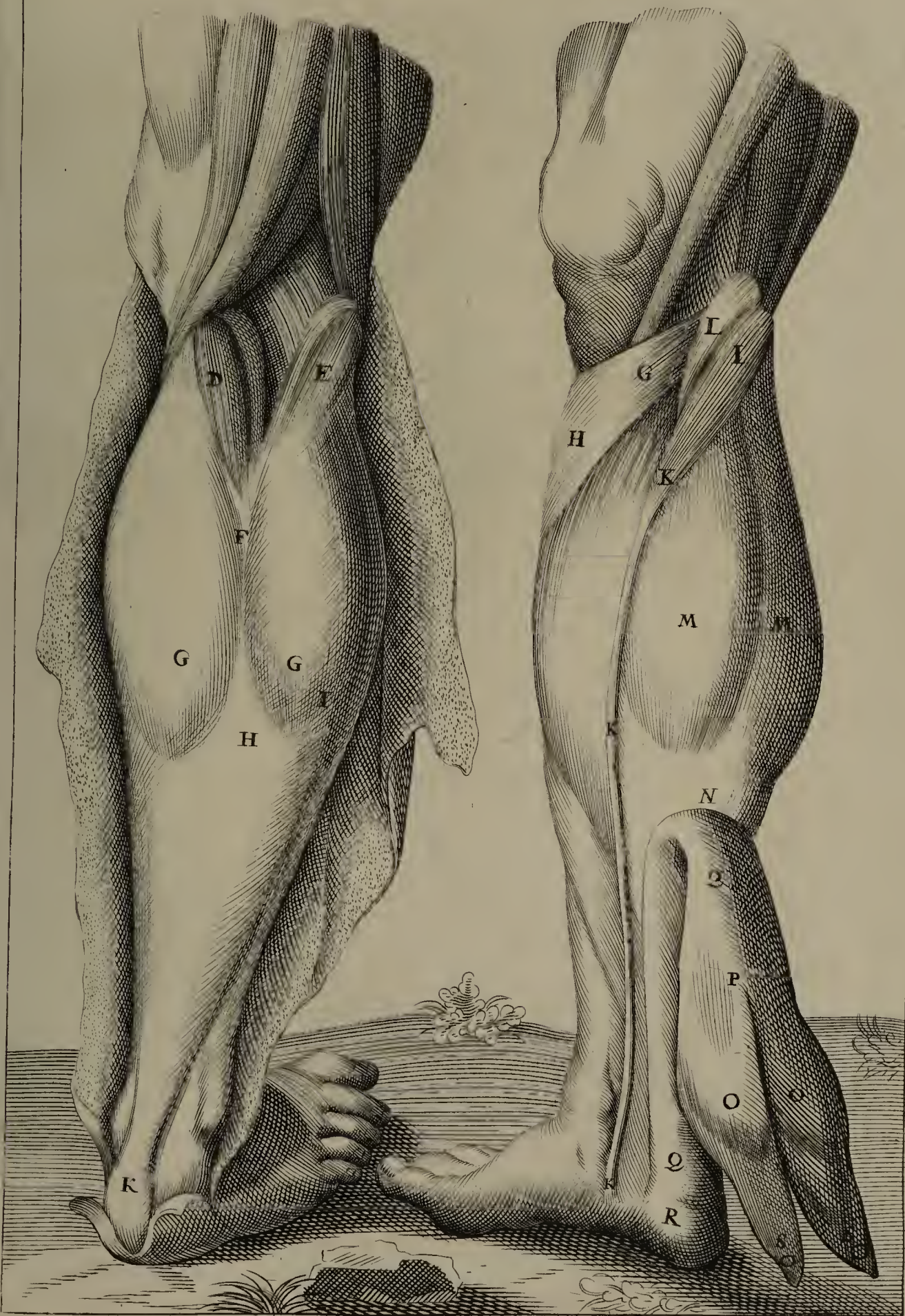
M. N. N. Gasterocnemius Internus.

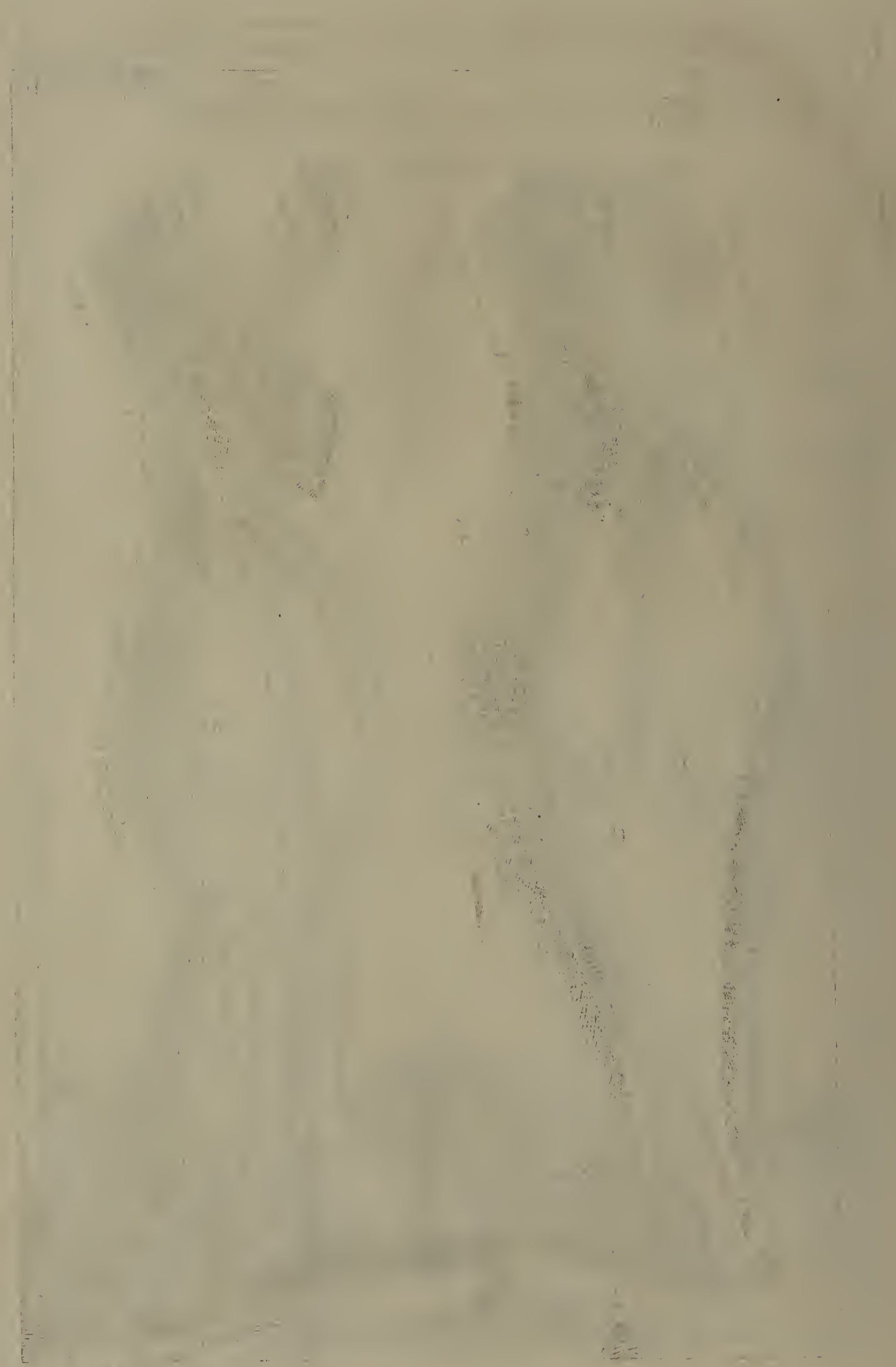
O. P. Q. Shews Gasterocnemius Externus laid bare.

Tibiaeus

Fig: I.

Fig: II.





Tibiæus Posticus seu Nauticus.

IT ariseth Flefhy from the Ligament which joyns the *Tibia* This brings the Foot inwards. and *Fibula*, according to their length, and from both Bones backwards, becomes a round Tendon, near the *Malleolus Internus*, where being bound by a ftrong Ligament, it overfpreads it, and recovering the Sole of the Foot, is inferted into that lower part of that *Os Tarfi*, which joyns it felf with *Os Cubiforme*; Sometimes there is feen, that it hath produced two Tendons, the one implanted into the *Os Naviculare*; the other into the Innominated Bone.

This Mufcle is called *Nauticus*, from the ufe which Seamen vf. make of it, when they do run up the Shrouds.

This you have at *Tab. 35. Fig. 1.* at *E. E. e.* Shewing its Flefhy beginning, *f.* Declaring its Tendon, *D. D. D.* Shews the fame at *Tab. 36. Fig. 2. E.* Shewing its Tendon.

B b b

Flexor

Flexor Pollicis.

This bends
the Great
Toe.

THe Great Toe hath allowed it variety of Muscles, the first of which is this arising sharp and Flefhy about the middle of the back part of the *Fibula*, descending larger, nearer the inward *Malleolus*, running obliquely under it, and is inserted into the last Bone of the Great Toe ; Under this Ligament lodgeth the *Os Sefamoides*.

obs.

This Tendon is seen sometimes to conjoyn with the Tendon bending the third Joynt, running to the second Toe, and before it reacheth the second Joynt of the Great Toe, requires the largest *Os Sefamoides*, which is in the other Joynts of the Toes.

This you have at *Tab. 37. Fig. 2. c* Shewing its Tendon, *D. D. D.* Shews its Flefhy part, *Tab. 36. Fig. 1.* at *N.* you have it laid bare, *M.* Shews this at *Tab. 34. Fig. 1.* *N.* Shews its long and narrow Tendon, *I. I.* Shews the same exactly at *Tab. ejusd. Fig. 2. K. K.* Shews its Tendon, *N.* Shews this laid bare at *Tab. 36. Fig. 2.*

Flexor

Flexor Secundi Internodii, Perforatus seu Profundus.

THis is a second of the Inflectors of the Toes, by some called *Flexor Brevis*, it ariseth Fleshy and Membranous from the extremity of *Os Calcis*, and marching half way the Sole of the Foet, divides it self into four round Tendons, which at their Insertions into the second Joynts of the lesser Toes are perforated for the transmission of the *Tertii Internodii Flexor*. This bends the Toes in the second Joynt.

This you have at *Tab. 37. Fig. 1.* at C. C. C. D. D. D. Shewing its four Tendons; And at *Fig. 2. ejusd. Tab.* you have the same laid bare at N. O. Shewing its Origination, P. P. P. P. Declaring its Tendons, Q. Shews the same laid bare at *Tab. 34. Fig. 2.* N. Shews the same laid bare at *Tab. 37. Fig. 2.* O. Shews its Origination, P. P. P. P. Shews the four Tendons of this Muscle:

The

The Explanation of the Thirty fourth Table.

F I G. I.

F *G. Suppopliteus laid bare.*
F. Shews its Flefhy beginning.
G. Its Flefhy Termination.
H. Flexor Tertii Internodii Digitorum.
I. Shews its length.
K. Its exquisite Tendon.
L. L. Peroneus Primus.
M. Flexor Pollicis.
O. Pollicem Adducens in situ.
P. P. Gasterocnemius Internus laid bare.
Q. Plantaris laid bare.
R. R. R. Shews its long and

round Tendon.

F I G. II.

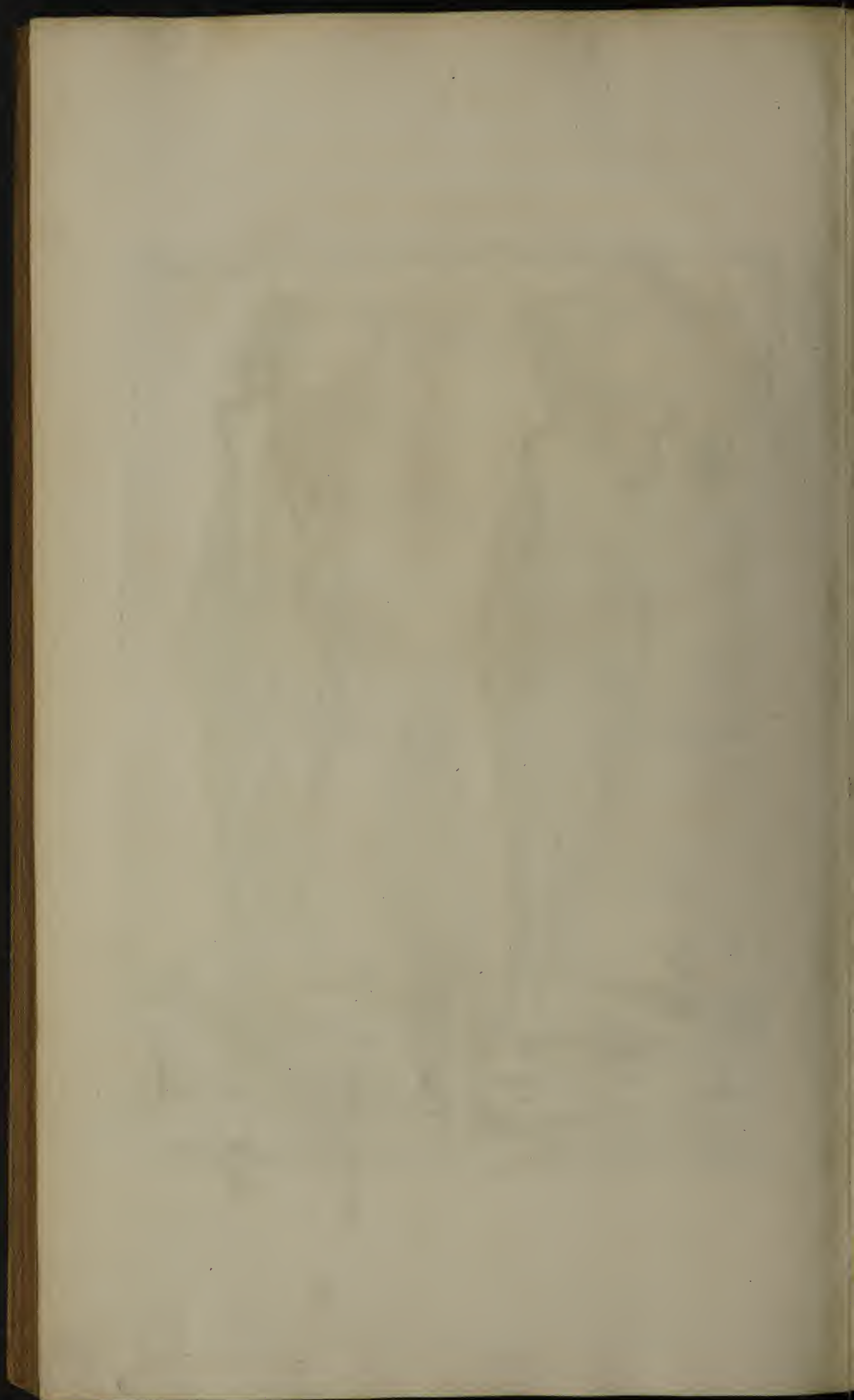
D. E. E. Flexor Tertii Internodii Digitorum.
D. Shews its sharp Origination.
E. E. E. Its slender and Flefhy Venter.
F. Its Tendon.
I. I. Pollicis Flexor.
K. K. Shews its Tendon.
L. L. Peroneus Primus in situ.
M. Its Tendon.
P. Minimum Digitum Abducens.
Q. Pollicem Adducens laid bare.

Flexores

Fig. 1

Fig. 2^a





Flexores Primi Internodii Digitorum, feu Lumbricales.

THese are called *Lumbricales* both from their Use, Figure, and Origination, much resembling Earth-Worms being put into the Hand. These bends the first Joynts of the lesser Toes.

They do arise round and Flethy from the Tendons of the *Perforans* and *Perforatus*, and are inserted by small Tendons laterally to the first Joynts of the Toes; if you examine this well, you will find them to receive an addition of Carnous Fibres from a Musculous Fleth seated or implanted in the inward Cavity of the *Os Calcis*, and proceeding Flethy half the Sole, there doth make these; and from it sometimes doth proceed a Tendon to the first of the Toes, and makes *Secundi Internodii*; and you shall also find that the Tendon of the *Tertii Internodii Flexor* doth run through the Body of this, and is not perfectly divisible.

These you have at *Tab. 37. Fig. 1.* at *K. K. K. K. F. F. F. F.* Shews the same at *Fig. 2. ejusd. Tab. R. R. R.* Shews their Flethy Mass laid bare at *Tab. 36. Fig. 1. S. S. S. S.* Shews the Tendons whence they do arise, *T. T. T. T.* Shews their four Tendons;

Adductor Pollicis Major.

*This brings
the Toes in-
wards.*

THis ariseth Nervous from the inward part of the Heel, and from the Ligament, which keeps that and the *Talus* together, and so growing Flethy and round, becomes Tendinous, inserting it self obliquely into the lateral and inward part of the first Joynt of the Great Toe.

off. This abduceth the Great Toe from the rest of the Toes ; or, as I may say, draws it inwards.

This you have at *Tab. 37. Fig. 1.* at *E. F. F.* Shewing its Tendon ; At *Fig. 2. ejusd. Tab.* you have the same laid bare at *Q. Q. M.* Also shews the same at *Fig. 1. Tab. 35.* laid bare, *O.* Shews this at *Tab. 34. Fig. 1.* *R.* Shews the same laid bare, *Fig. 2. ejusd. Tab.*

Abdu

Abductor Minimi Digiti.

THe Little Toe hath a particular *Abductor* allowed it; from the Heel, arising Nervous from its External part, and growing Flethy in its progress, runs with a small Flethy Tendon under the *Os Metatarsi*, which is immediately plac'd before the Least Toe, and so is inserted into the External side of its first Joynt.

*This abductor
ceith the little
Toe from the
rest.*

This you have at *Tab. 37. Fig. 1.* at *G. G. H. H.* Shews its Tendon, *I. I.* Shews the same laid bare at *Fig. 2. ejusd. Tab.* *L. M.* Shewing its Tendon, *K. K.* Shews its beginning, *Q.* Shews the same at *Tab. 35. Fig. 1.* *P.* Shews this at *Tab. 34. Fig. 2.*

Addu.

Adductor Minor, five Transversalis Placentini.

*This draws
the great
Toe to the
little Toe.*

THis by *Casseri*, who first found this out, gave it the name of *Transversalis*, because it binds the first Joynt proceeding from the Ligament of the Little Toe, and is carried transversely Fleshy, and marcheth out with a short and broad Tendon inwardly, to the first Bone of the Great Toe.

Use.

The Author of this Muscle doth assign this Use to it, That drawing the Great Toe towards the Little one, it makes a hollownes in the Foot; so as that in unequal and stony places, an apprehension as it were being hereby made, we may tread and walk more steadily, and commodiously, this being as a Ligament to the Foot, to keep it from slipping or sliding, and for a more secure ambulation; for by the help of this Muscle, the Foot is brought into that Figure, that it makes the step sure, and as it were doth apprehend the part it is set on.

This you have at *Tab. 37. Fig. 4.* at *E.* laid bare, *H.* Shews the same at the Letter *A.* the first Toe, *P.* Shewing the same at *Tab. 36. Fig. 2.* *P.* Shews the same at *Tab. 35. Fig. 1.*

Tibiæus

Tibæus Anticus, five Musculus Catenæ.

THis is the first of the Inflectors, whose Tendon being transversely dissected or amputated, the Patient is compelled to carry his Foot in a Sling, by the benefit of which he is able in his passage both to lift up and inflect his Foot. *This bends the Ankle.*

This Muscle ariseth sharp and Fleshy from the uppermost Appendix of both the *Focils*, forwards: as also from the Ligament which binds them together, then being dilated, is narrowed about the middle of the *Tibia*, growing into a strong and round Tendon, running obliquely over the *Tibia*, and under the Annular Ligament, and is implanted into the inside of that *Os Tarsi* that is before *Os Pollicis*.

This Muscle I conceive governeth the Foot in motion, that it doth not squail to *match* outward. *use.*

This you have at *Tab. 35. Fig. 2.* at *C. C. a.* Shewing its beginning, *b.* Its Termination and Tendon, *M. N.* Shews this at *Tab. 36. Fig. 1. O.* Shews its Tendon.

The Explanation of the Five and thirtieth
Table.

FIG. I.

E *E. Tibiæus Posticus.*
e. Shews its Origination.
f. Its Tendon.
G. G. *Peronæus Secundus.*
E. Shews its Tendon.
M. *Pollicem Adducens laid bare.*
N. O. *Two Interosseal Muscles.*
P. *Transversalis Placentini.*
Q. *Minimum. Digitum Abdu-*
cens.

FIG. II.

C. C. *Tibiæus Anticus.*

a. Shews its beginning.
b. b. Its Tendon.
H H. *Peronæus Secundus.*
e. Shews its Origination.
D. E. Its Tendon.
I. I. *Extensor Tertii Internodii*
Digitorum
K. *Shews its four Tendons.*
L. *Extensor Secundi Internodii*
Digitorum.
M. M. M. *Shews its Tendon.*
N. *Pollicis Extensor laid bare.*
O. *Shews its Termination.*





Fibulæus five Peronæus Primus, aut Posticus.

IT ariseth Nervous from the upper Appendix of the *Fibula*; This brings the Foot outward. and descending, it adheres to the outward part thereof, being externally round, inwardly livid, next the Muscle red, and marching half way, it becomes a Tendon running obliquely backward through the *Sinus* under the external *Mal-leolus*, and is inserted into the Root of the *Os Tarfi*, that adjoyns to the *Os Pollicis*.

This Muscle draweth the Foot somewhat outward, and so regulateth it in Progressive Motion, that it cannot be cast too much inward. Use.

This you have at *Tab. 36. Fig. 1.* at *B. C. D. D.* Shewing its Flethy Belly, *D.* Its Tendon, *V.* Shews the same laid bare at *Fig. 2. ejusd Tab. L. L.* Shews this at *Tab. 34. Fig. 1. L. L.* Shews the same at *Tab. ejusd. Fig. 2.*

Peronæ

Peronæus Secundus sive, Semifibulæus,
aut Anticus.

*This bends
the Ankle.*

THis Muscle ariseth long and Fleſhy from the *Fibula*, to which it adheres, and having made half its progreſs, becomes a round Tendon, running by the External *Malleolus*, and is implanted by two Tendons into *Os Metatarſi*, adjoyning to *Minimus Digitorum*.

This Muscle is alſo called *Semifibulæus*, it being a near neighbour to the *Fibula*; As alſo by *Spigelius* is named *Bicornis* from its double Inſertion into the ſmall Bone adjoyning to *Minimus Digitorum*.

This you have at *Tab. 36. Fig. 1.* at *E. E. F.* Shewing its Tendon, *I. I. I.* Shews the ſame at *Fig 2 ejusd. Tab. K.* Shewing its Tendon, *G. G.* Shews the ſame laid bare at *Tab. 35. Fig. 1.* *H.* Shews its Tendon and place of its Inſertion, *H. H.* Shews the ſame at *Tab. 35. Fig. 2.*

Pollicis

Pollicis Tenfor.

THis ariseth Flethy from the *Fibula* (or as *Vesalius* offer-^{This extends the great toe.} eth) from the outward side of the *Tibia*, where it parts from the *Fibula*, as also from the Ligament that joyns them, to which it strongly adheres, and so becoming a Tendon, runneth over the lower part of the *Fibula*, and under the transverse Ligament, and is inserted into the two Joynts, in the upper part of the Great Toe, and doth extend them directly; sometimes this Tendon is seen divided into two: one of which is inserted into the last Joynt of the Great Toe, the other into the *Os Metatarsi* which lies just under it. ^{We.}

This you have at *L. Tab. 36. Fig. 1. b.* Shewing its Tendon, *N. N.* Shews this laid bare at *Fig. 2. Tab. 35. O.* Shews its Termination.

E e e

The

The Explanation of the Six and thirtieth Table.

F I G. I.

B C. D. Peroneus Primus.
B. Shews its strong Origination.
 C. *Its Venter.*
 D. D. *Its Tendon.*
 E. E. Peroneus Secundus.
 f. *Shews its Tendon.*
 G. Extensor Tertii Internodii Digitorum.
 H. H. H. H. *Shews its four Tendon.*
 I. *Its fifth Tendon.*
 L. Pollicis Tensor.
 a. *Shews its beginning.*
 b. *Its Tendon.*
 M. N. O. Tibiæus Anticus.
 M. *Its Origination.*
 N *Its Flefhy Venter.*

O. *Its Tendon.*
 S. Extensor Secundi Internodii Digitorum.

F I G. II.

D. D. D. Peroneus Primus.
 E. *Its Tendon.*
 I. I. I. Peronæus Secundus.
 K. *Shews its Tendon.*
 N. Pollicis Tensor *laid bare.*
 P. Transversalis Placentini.
 R. R. T. T. Lumbricales *laid bare.*
 R. R. R. *The Flefhy Mafs from whence they do arife.*
 S S. S. S. *Shews the four Tendons whence they do arife.*
 T. T. T. T. *Shews their own four Tendons.*

Extens

Fig. 1.

Fig. 2.





Extensor Tertii Internodii Digitorum, aut Longus.

THis ariseth with a Nervous and Flethy beginning, from the outward, and forward Appendix of the *Tibia*, ^{This extends the third Joynts of the Toes.} and presently becoming Flethy; and adhering to the Ligament that joyns the *Tibia* and *Fibula*, it descends directly according to the length of the *Fibula*, and passing under the Annular Ligament, it is divided into four Tendons, the which do terminate in the upper part of the third or last Joynt of the four lesser Toes, and so extends them. ^{246.}

The other Tendons are tied amongst or between themselves by a certain Membranous Ligament, where they run through or over the back of the Foot.

This you have at G. Tab. 36. Fig. 1. H. H. H. H. Shews its four Tendons, I. I. Shews this at Tab. 35. at Fig. 2. K. Shews its four Tendons.

Extensor Secundi Internodii Digitorum,
aut Brevis.

*This extends
the second
Joyn.*

THis ariseth broad and Flethy from the transverse Liga-
ment upon the top of the Foot, and then appears, di-
viding it self into four several Muscles, which coming
to the Toes, sendeth forth Tendons to the second Bone of the
four lesser Toes, but chiefly to the second Joynts, where they
intersect the Tendons of the former.

Use.

These two are allowed to extend the four lesser Toes.

This you have at *Tab. 35. Fig. 2.* at *L.* *M. M. M.* Shews its
Tendons, *S.* Shews the same at *Tab. 36. Fig. 1.*

Interos.

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The Explanation of the Seven and thirtieth Table.

F I G. I.

C C.C. Flexor Secundi Internodii Digitorum.
D. D. D. Shews its four Tendons.
E. E. Pollicem Adducens in situ.
F. F. Its Tendon.
G. G. Minimum Digitum Abducens.
H. H. Shews its Tendon.
K. K. K. K. Lumbricales.
L. L. L. L. Their four Tendons.

K. K. Shews its beginning.
L. One Tendon of this Muscle.
M. M. Shews the other.
N. Flexor Secundi Internodii Digitorum laid bare.
O. Shews its sharp and Nervous beginning.
P. P. P. P. Shews its four Tendons.
Q. Q. Pollicem Adducens laid bare.
R. R. Two more of the Interosseal Muscles.

F I G. II.

B. The Tendon of Flexor Tertii Internodi Digitorum.
C. Shews the Tendon of Flexor Pollicis.
D. D. D. Its Fleshy part.
E. E. E Its four Tendons.
F. F. F. F. Lumbricales.
G. G. G. G. Their Tendons.
H. H. Two of the Interosseal Muscles.
I. I. Minimum Digitum Abducens.

F I G. III.

C. C. C. C. Five of the Interosseal Muscles.
D. D. D. D. Other five of the Interosseal Muscles.
E. Transversalis Placentini.
F. F. F. F. F. Five of the Interosseal Muscles laid bare.
G. G. G. G. The other five laid bare.
H. Transversalis Placentini.

Interos-

Fig. 1.



Fig. 2.



Fig. 3.

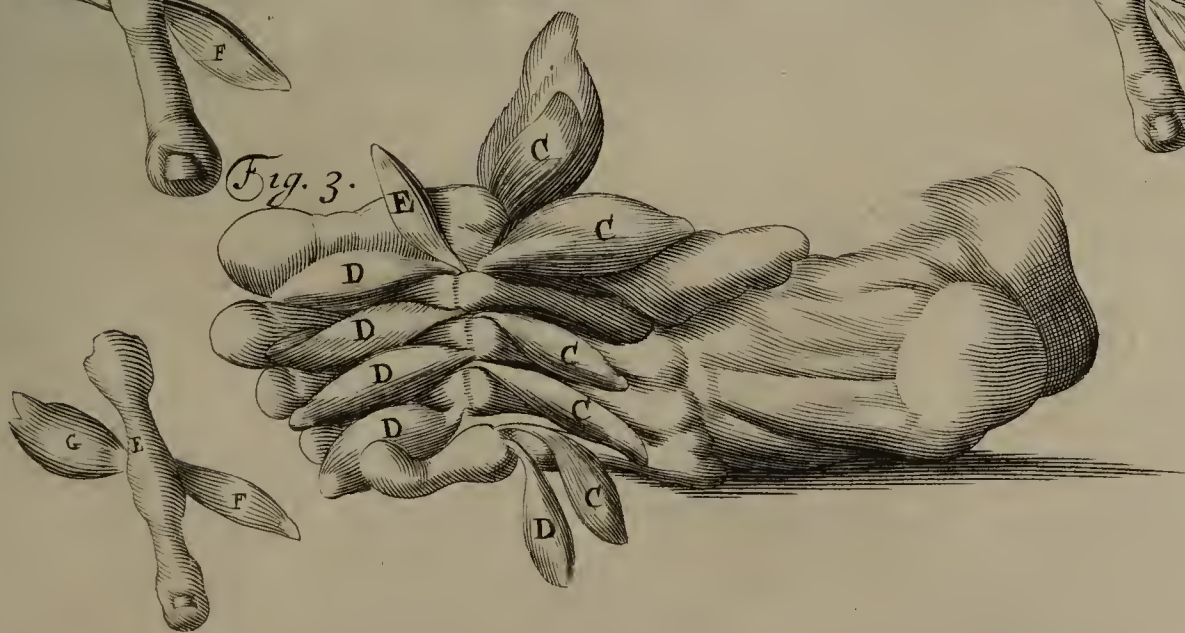


Table 1

The table is extremely faint and illegible. It appears to have multiple rows and columns, possibly containing botanical or scientific data. The content is too light to transcribe accurately.

Interossei.

THese have their names from their habitations; they dwelling amongst the Bones; These Muscles do arise ^{These move the Foot obliquely.} Flethy from the sides of the Bones of the *Metatarsus*, and are inserted by some broad, but short Tendons, into the first Joynts of the Toes outwardly, but inwards to the second Joynts thereof. The outward working, they do abduce the Toes: the inward do adduce them; they both working together, do extend them. use,

In the Sole of the Foot, which by some is called *Vestigium*, is a Flethy Mass observable, the which like a Pillow or Bowls-ter doth keep warm the Tendons of the Muscles of the Foot, the which some Anatomists, although confusedly, do joyn with the *Musculus Transversalis*.

These Muscles you have delineated at *Tab. 37. Fig. 3.* at C C. C. C. D. D. D. D. D. And at F. F. F. F. F. G. G. G. G. G. in the Toes by themselves.

Thus have I concluded the whole Discourse of Muscles; all I shall farther add, is, the Enumeration of them, with their Reductions to their proper Places, Uses, and Offices, being either Relative to the Venters or to the Articulations, having already presented and drawn forth to you every of their Forms and Shapes: as also shewn their Originations and Terminations; leaving you Directions, how to find out every Muscle in its order by a proper Index made for that purpose.

F I N I S.

F f f

This

This Table sheweth the Reduction of
the Muscles each to their proper place.

Use and Part.

The Forehead is lifted up by *Frontalis*.

The Eyebrows, { The upper } Lifted up by *Aperiens Rectus*.
 { Depressed by *Claudens Superior*.
 { The nether lifted up by *Claudens Inferior*.

The Eyes, { Rightly } Upwards by *Attollens*.
 { moved } Downwards by *Deprimens*.
 { Inwards by *Adducens*.
 { Outwards by *Abducens*.
 { Obliquely } Downwards externally by *Circumagens Exterior*.
 { Upwards internally by *Circumagens Interior*.

The Nose is { Dilated by } *Primus Aperiens*.
 { *Secundus Aperiens*.
 { Contracted by } *Primus Constringens*.
 { *Secundus Constringens*.

The Lips are { Lifted up by *Attollens*.
 { Drawn laterally by *Abducens*.
 { Drawn down by *Deprimens*.
 { Purs'd up by *Labium Constringens*.

The Cheeks are { Drawn down by *Platysma Myodes*.
 { Drawn inward by *Buccinator*.

The nether Man- { Upwards by *Temporalis*.
dible is drawn { Downwards by *Digastricus*.
 { Laterally by *Masseter*.
 { Forwardly by *Pterygoides Externus*.
 { Backwards by *Pterygoides Internus*.

The Ears which { Upwards by *Attollens*.
are moved { Externally } Downwards by *Deprimens*.
 { Forwards by *Adducens*.
 { Backwards by *Abducens*.
 { Internally } By *Externus*.
 { By *Internus*.

The Tongue is moved { In Constriction, } By *Lingualis*.
 { In Dilatation }
 { Forwards by *Genioglossus*.
 { Backwards by *Hypoglossus*.
 { Upwards by *Myloglossus*.
 { Downwards by *Ceratoglossus*.
 { Laterally by *Styloglossus*.

The

The *Os Hyoides* is moved by

{	Rightly	Upwards by	<i>Mylohyoides.</i>
		Downwards by	<i>Geniohyoides.</i>
	Obliquely	Upwards by	<i>Styloceratomyoides.</i>
		Downwards by	<i>Ceratomyoides.</i>

The Palate is { Attolled by *Sphenopalatinus*.
Depressed by *Pterygopalatinus*.

The Fauces are { Dilated by } Sphenopharyngæus Primus.
Sphenopharyngæus Secundus.
{ Contracted by } Æsophagæus.
Cephalopharyngæus.
Stylopharyngæus.

The Larynx is { Dilated } When the Thyroid is { Extended by { Sternothyroidæ.
Cricoarytenoideus Anticus.
Contracted by Hyothyroideus.
Shut } While the { Contracted } Directly by Throarytenoideus.
Obliquely lateral by Arytenoideus.
Opened } Arytenoid is { Extended } Rightly by Cricoarytenoideus Posticus.
Obliquely laterally by Cricoarytenoideus Lateralis.

The Head is { Contracted by { *Mastoidens* if both move.
 { Laterally if but one.
 { *Splenius* or *Triangularis*.
 { *Trigeminus*.
 { *Recti Majores*.
 { *Recti Minores*.
 { Turn'd about by { *Obliqui Superiores*.
 { *Obliqui Inferiores*.

The Neck is { Contracted by } Longus.
Scalenus.
Extended by } Transversalis.
Spinatus.

The <i>Thorax</i> is moved	{	Primarily by	{	Dilate in	{	Freely the <i>Diaphragma</i> alone contracted:	
		his proper		breathing		Coactively <i>Diaphragma</i> and <i>Intercoſtales Externi</i> .	
	{	Muscles which do	{	Conſtringe	{	Freely <i>Diaphragma</i> alone relaxed.	
				in breathing		Coactively <i>Diaphragma</i> and <i>Intercoſtales Interni</i> .	
	{	Extended as	{	<i>Longiſſimus Dorſi</i> .	{	which are	{
<i>Semiſpinatus</i> .				retained in		(<i>Poſtici</i> .	
			<i>Sacroſolumbus</i> .		place by		<i>Serratus Major</i>
{	Contracted as	{	<i>Muſculi Recti</i> .	{	<i>Abdominis</i> .		
			<i>Obliqui Aſcendentes</i> .				
{	Turn'd about by	<i>Transverſi</i> .					
{	Secondarily by the	{	Contracted by	{	<i>Quadratus</i> .		
Lumbal Muſcles	Extended by		<i>Sacer</i> .				

The *Abdomen* is compressed { Laterally by } *Obliqui Ascendentes.*
 { Forwards by } *Recti.*
 { Downwards by } *Pyramidales. or*
 { Sometimes by } *Transversi.*

The Loyns are { Contracted by *Quadratus*.
Extended by *Sacer*.

The

The Testicles are raised by *Cremasteres*.

The Bladder { Retains by *Sphincter Vesicae*.
Excretes by { *Detrusor Urinae*.
 Pyramidalis.
 Obliqui Ascendentes Abdominis.

The Clitoris is { Raised by *Musculi Graafiani*.
Depressed by *Musculus Labiorum uteri contractorum*.

The Anus is { Purs'd up by *Sphincter Ani*.
Elevated by *Levatores Ani*.

The Penis is improp- { Erected by *Erectores* or *Directores*.
perly said to be { Accelerated by *Accelatores*.

The Scapula is { Variouly by *Cucullaris*.
moved { Upwardly by *Levator Patientia*.
Backwards by *Rhomboides*.
Forwardly upwards by *Serratus Minor* }
Forwardly downwards by *Serratus Major* } *Anticus*.

The Os Humeri { Forwards by *Pectoralis*.
is moved { Upwards by { *Deltoides*.
 Octavus Humeri Placentini.
Downwards by *Rotundus*.
Is carried about { External { *Suprascapularis Inferior*.
towards the { part by { *Suprascapularis Superior*.
 Nonus humeri Placentini.
 Internal part by *Subscapularis*.

The Cubite is { Extended by { *Gemellus Major*.
 Gemellus Minor.
Contracted by { *Biceps*.
 Brachialis.

The Radius is { Pronated by { *Quadratus*.
 Teres.
Supinated by { *Longus*.
 Brevis.

The Carpus is { Contracted by { *Flexor Carpi Interior*.
 Flexor Carpi Exterior.
Extended by { *Extensor Carpi Exterior*.
 Extensor Carpi Interior.

The Fingers are { Contracted by { *Flexor Primi* {
 Flexor Secundi { *Internodii*.
 Flexor Tertii {
Extended by { *Primus* {
 Secundus { *Extendentium Digitorum*.
 Interossei {
Moved laterally by { *Interossei*.
 Abductor Minimi.
 Abductor Indicis.

The

The Thumb is {
Contracted { First by { *Flexor Primi Internodii.*
Flexor Secundi Internodii.
Secondly { *Primus*
Secundus } *Flexores Internodii.*
by { *Tertius*
Quartus }
Thirdly by *Tertii Internodii Flexor.*
Extended by { *Extensor Primus.*
Extensor Secundus.
Moved { Laterally internally by *Adducens.*
Outwardly by *Abducens.*

The Thigh is {
Extended obliquely { Backwards by *Gluteus Major*.
 { Forwards by *Gluteus Medius*.
 { Rightly by *Gluteus Minim.*
Contracted { Directly by { *Psoas*.
 { *Iliacus Internus*.
Obliquely by { *Triceps*.
 { *Lividus*.
Upwards by *Piriformis*.
Moved about { Inwards by *Obturator Externus*.
 { Outwards by *Obturator Internus*.
Backwards by *Quadrigimus*.

The Leg is {

Contracted by	{	<i>Sartorius.</i>
		<i>Gracilis.</i>
		<i>Seminervosus.</i>
Extended by	{	<i>Semimembranosus.</i>
		<i>Biceps.</i>
		<i>Membranösus.</i>
Obliquely moved by	{	<i>Rectus.</i>
		<i>Vastus</i> { <i>Externus.</i>
		{ <i>Internus.</i>
		<i>Suppliteus.</i>

The Ankle is { Extended by *Gastrocnemius* } *Externus*.
 { Contracted by { *Tibius Anticus*.
Peroneus Secundus.
 Moved obliquely lateral { Internally by *Tibius Posticus*.
 { Externally by *Peroneus Primus*.

The four lesser
Toes are { Contracted by { *Perforans* in the third
Lumbricales in the first } Joynt.
{ Extended by { *Interossei* in the first Joynt.
Secundi Internodii Tensor.
Tertii Internodii Tensor.

The Great Toe is { Contracted by *Flexor*.
Extended by *Tensor*.
Obliquely moved by *Abductor*.

The first Joynts of the Toes are kept together by *Transversalis Placentini*.
Of the Sole of the Foot is moved by *Plantaris*.

The Skin { Of the Palm of the Hand by { *Palmaris.*
 { *Caro Musculosa Quadrata.*

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F I N I S.

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